

Title: Cooling Apparatus Boiling and Condensing Refrigerant

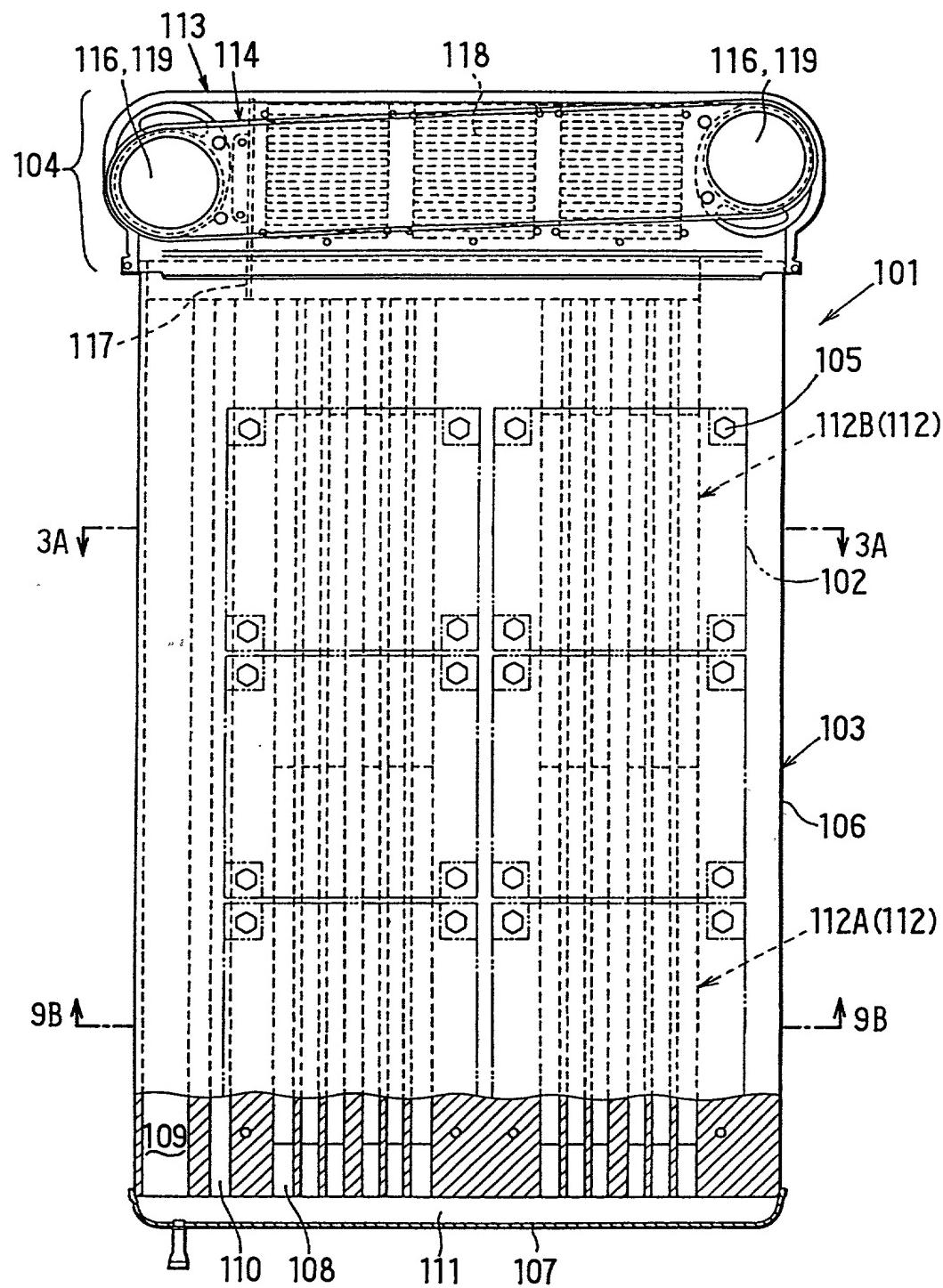
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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# FIG. I



Title: Cooling Apparatus Boiling and Condensing Refrigerant

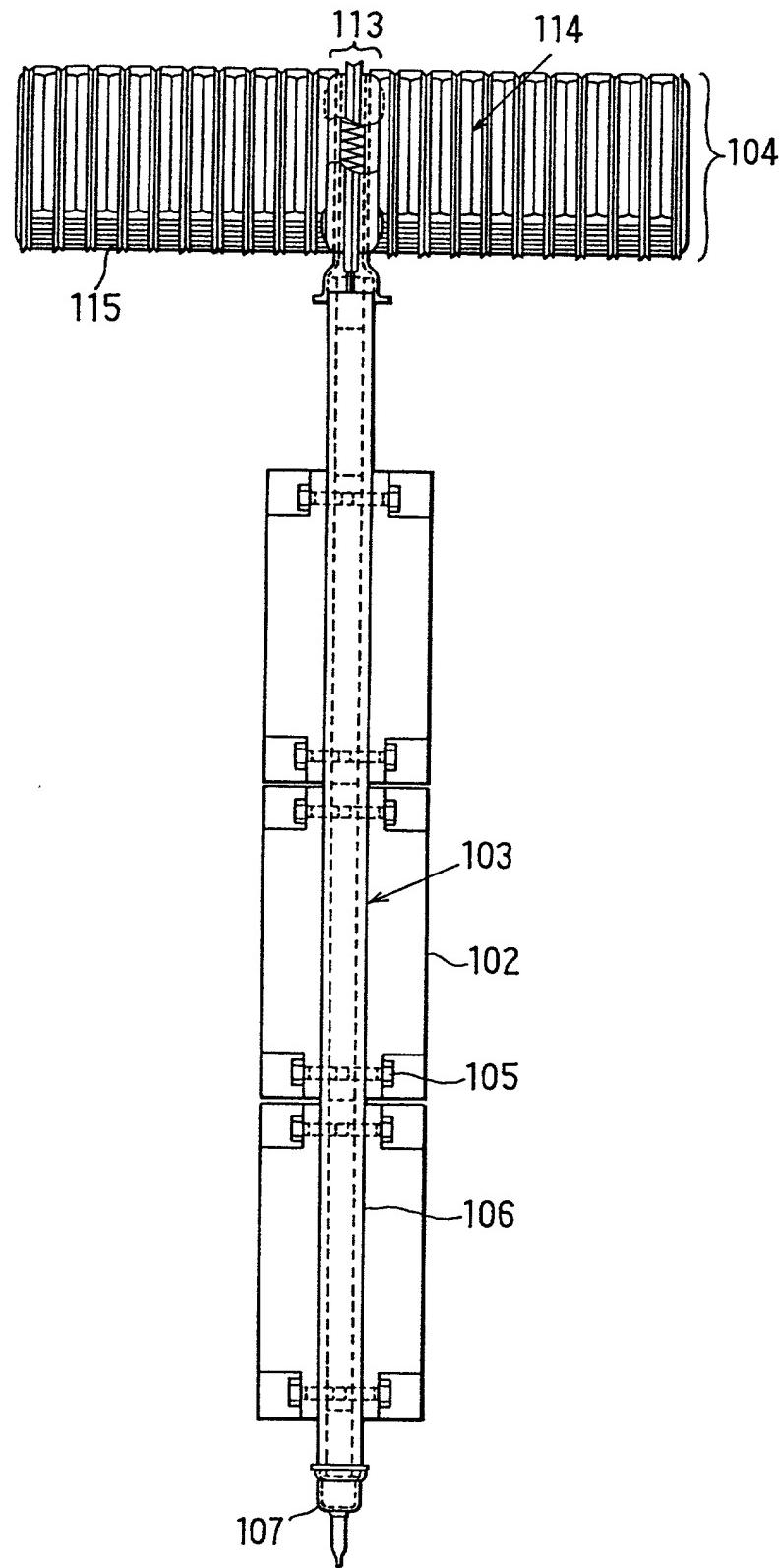
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

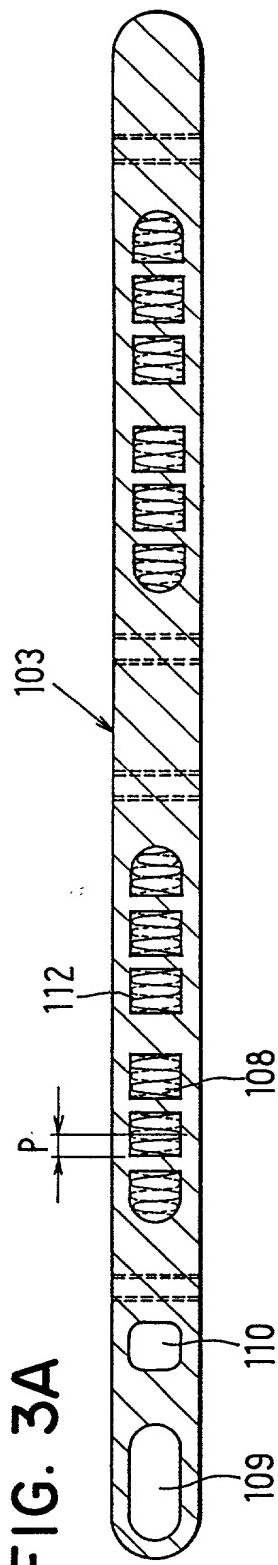
Atty. Ref. No.: 4041J0229DVA

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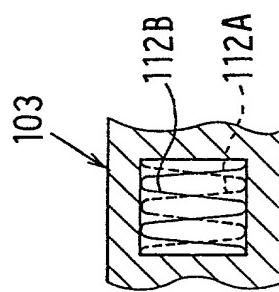
## FIG. 2



**FIG. 3A**



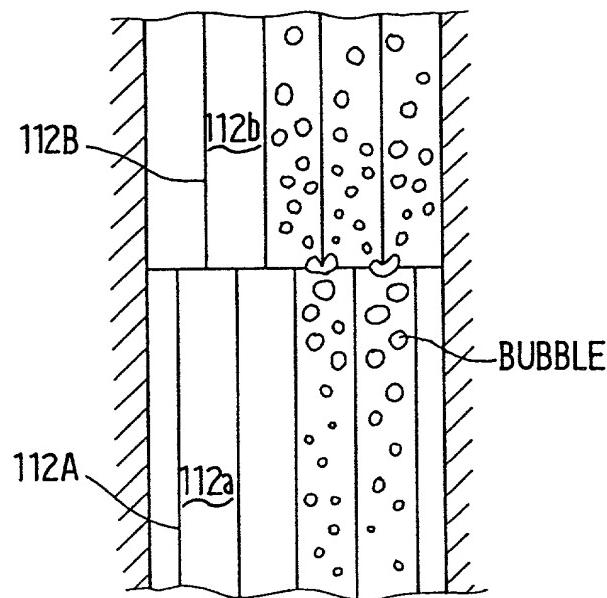
**FIG. 3B**



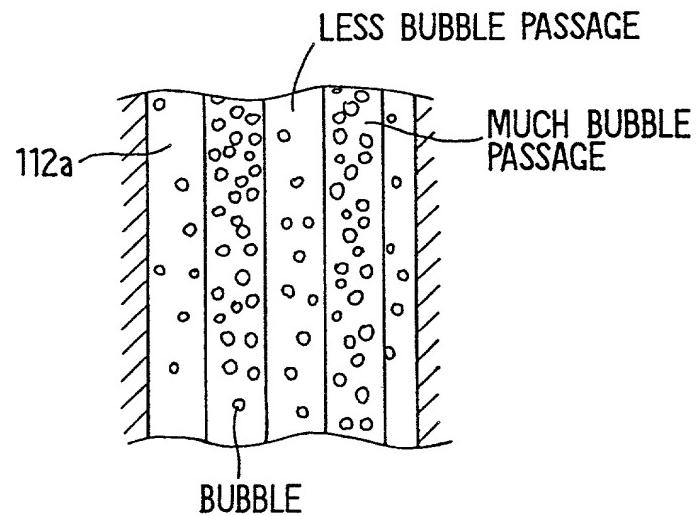
Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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**FIG. 4**



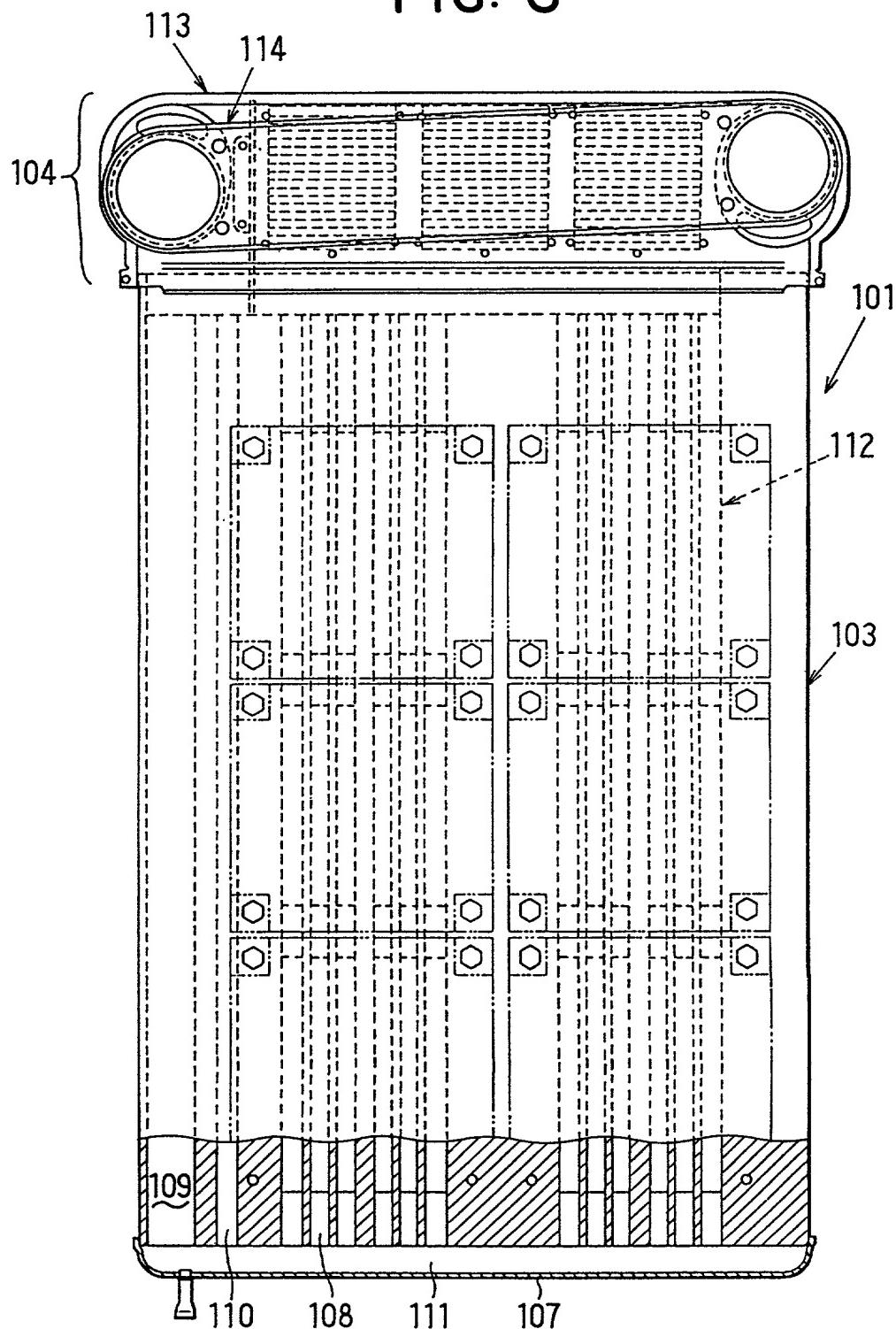
**FIG. 5**



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 6



Title: Cooling Apparatus Boiling and Condensing Refrigerant

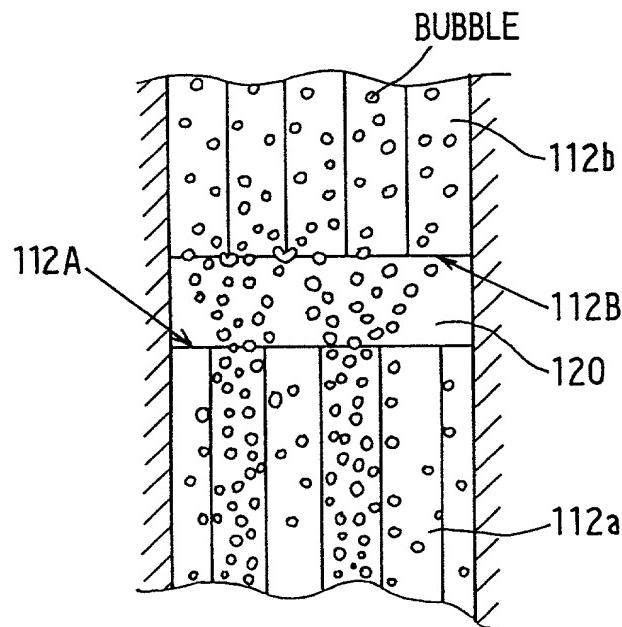
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

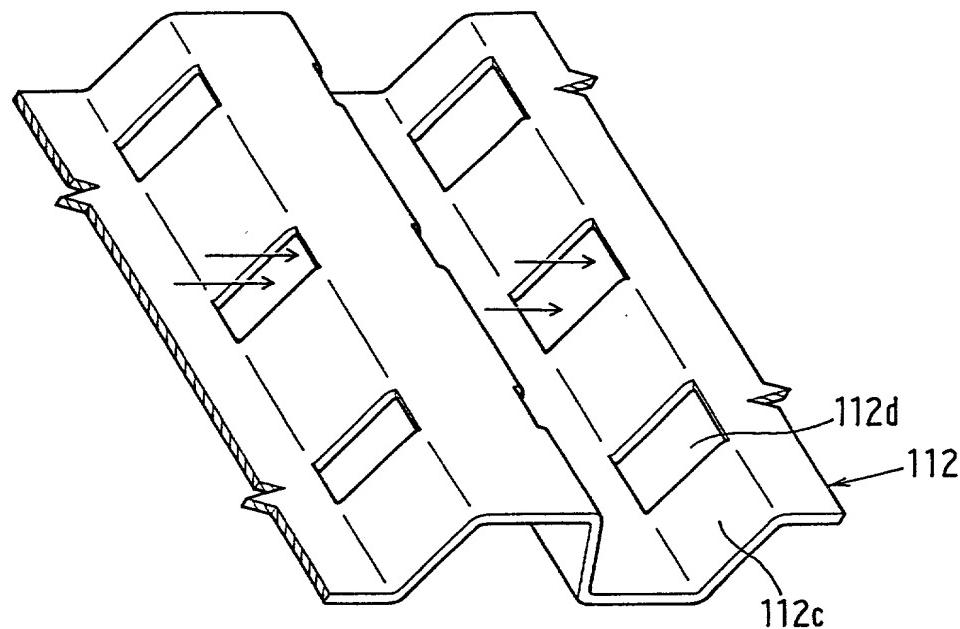
Atty. Ref. No.: 4041J0229DVA

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**FIG. 7**



**FIG. 8**



Title: Cooling Apparatus Boiling and Condensing Refrigerant

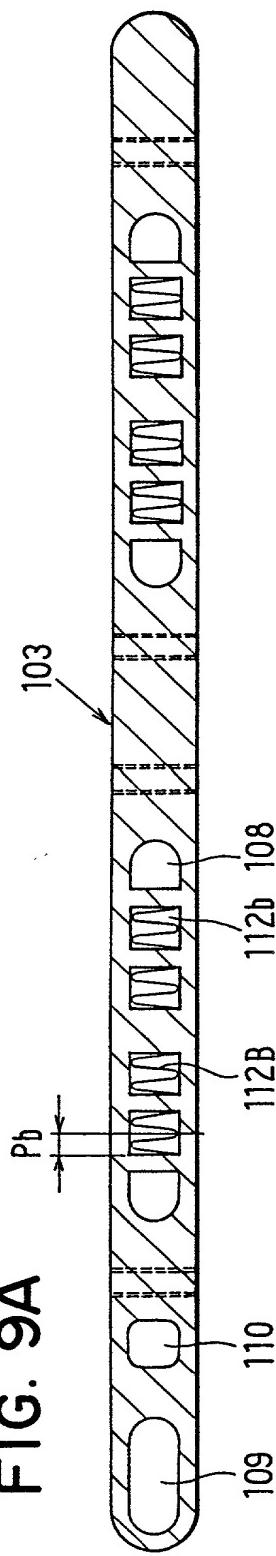
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

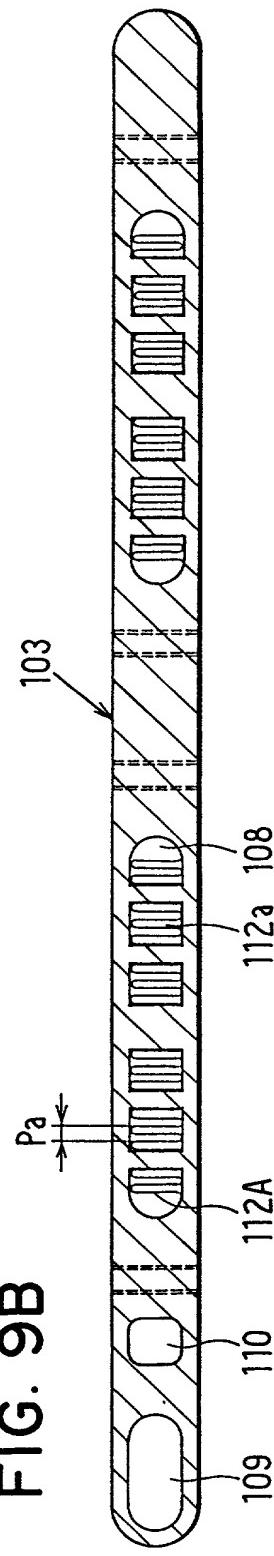
Atty. Ref. No.: 4041J0229DVA

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**FIG. 9A**



**FIG. 9B**



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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**FIG. 10**  
PRIOR ART

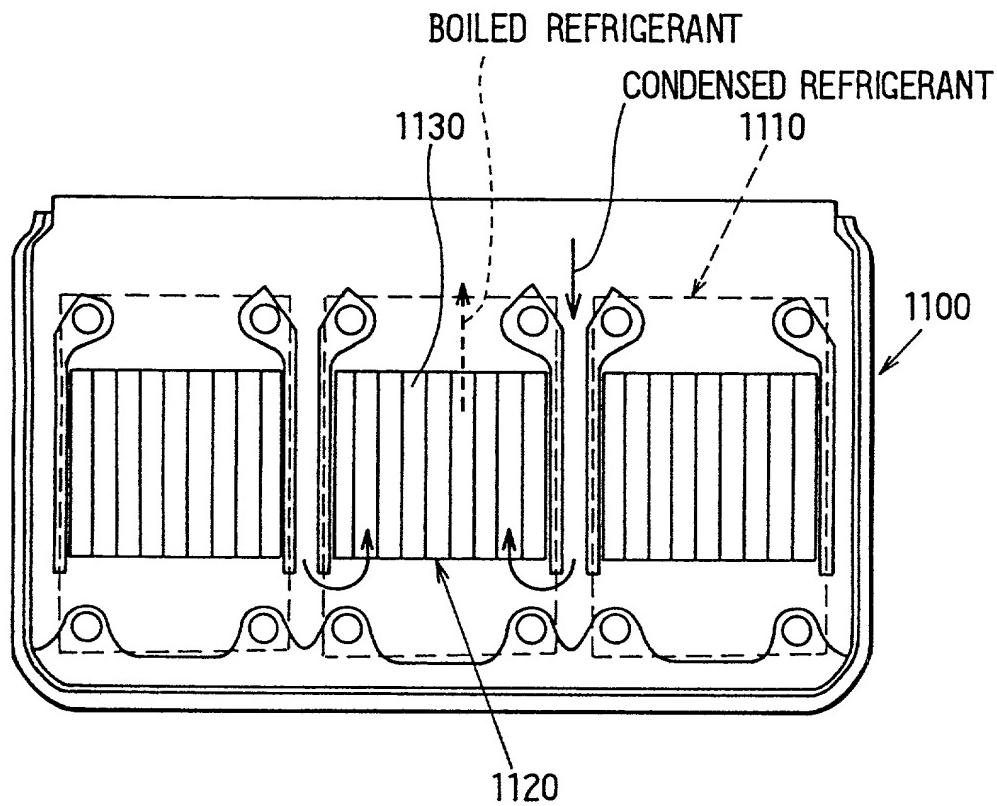
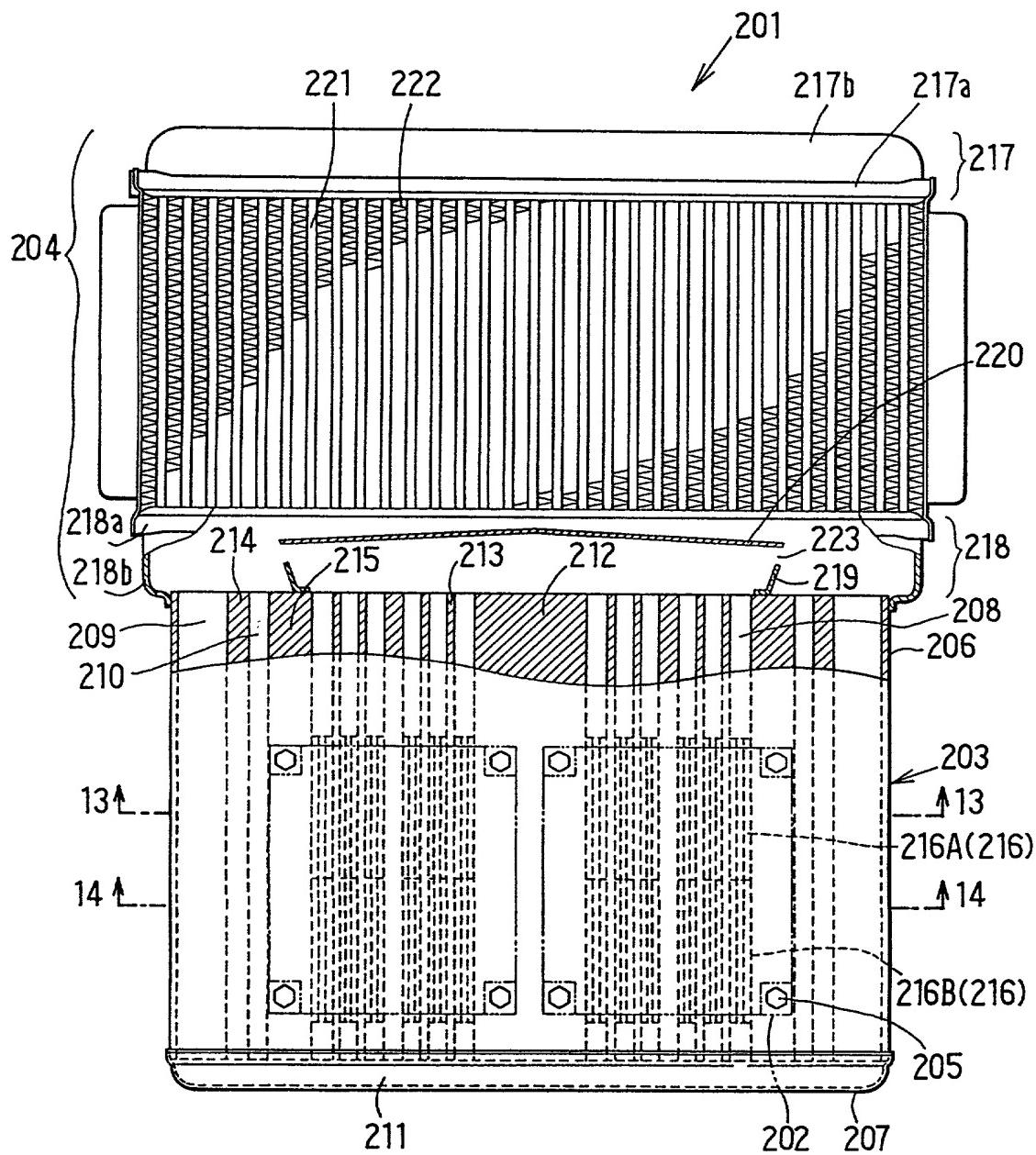


FIG. 11



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 12

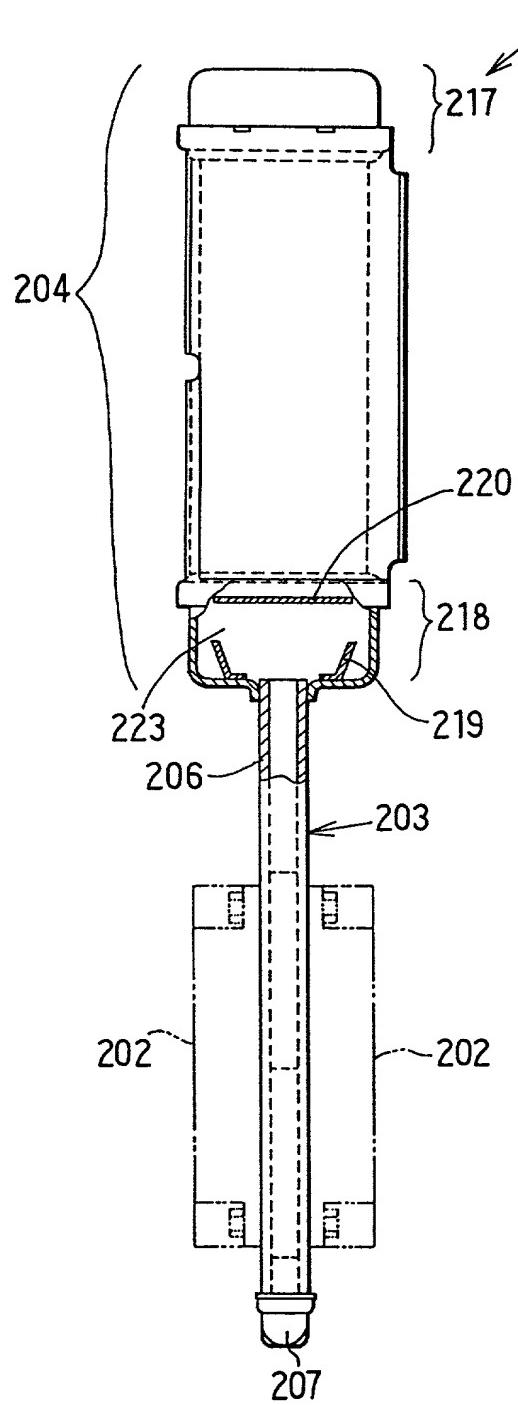
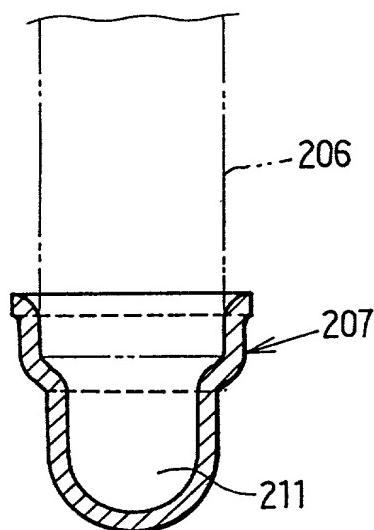


FIG. 15



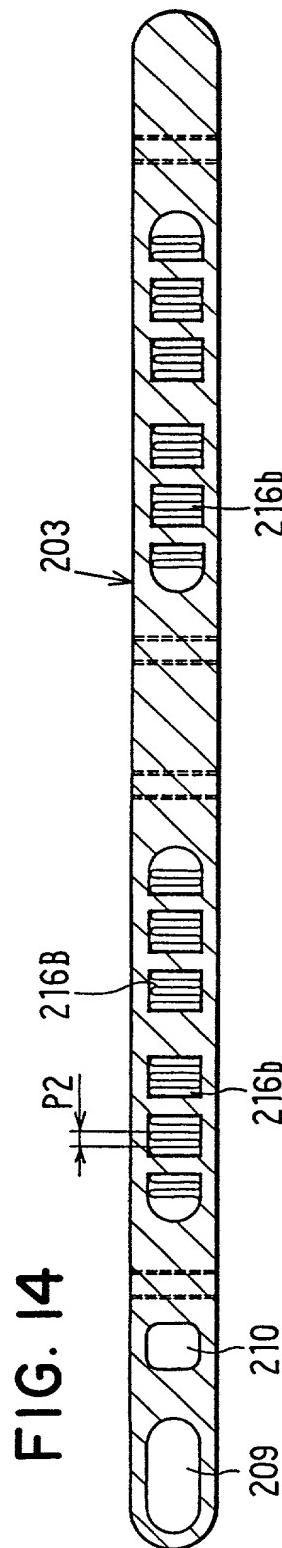
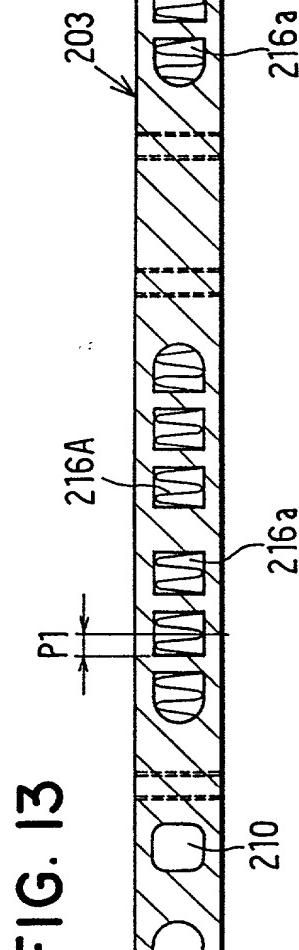
Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

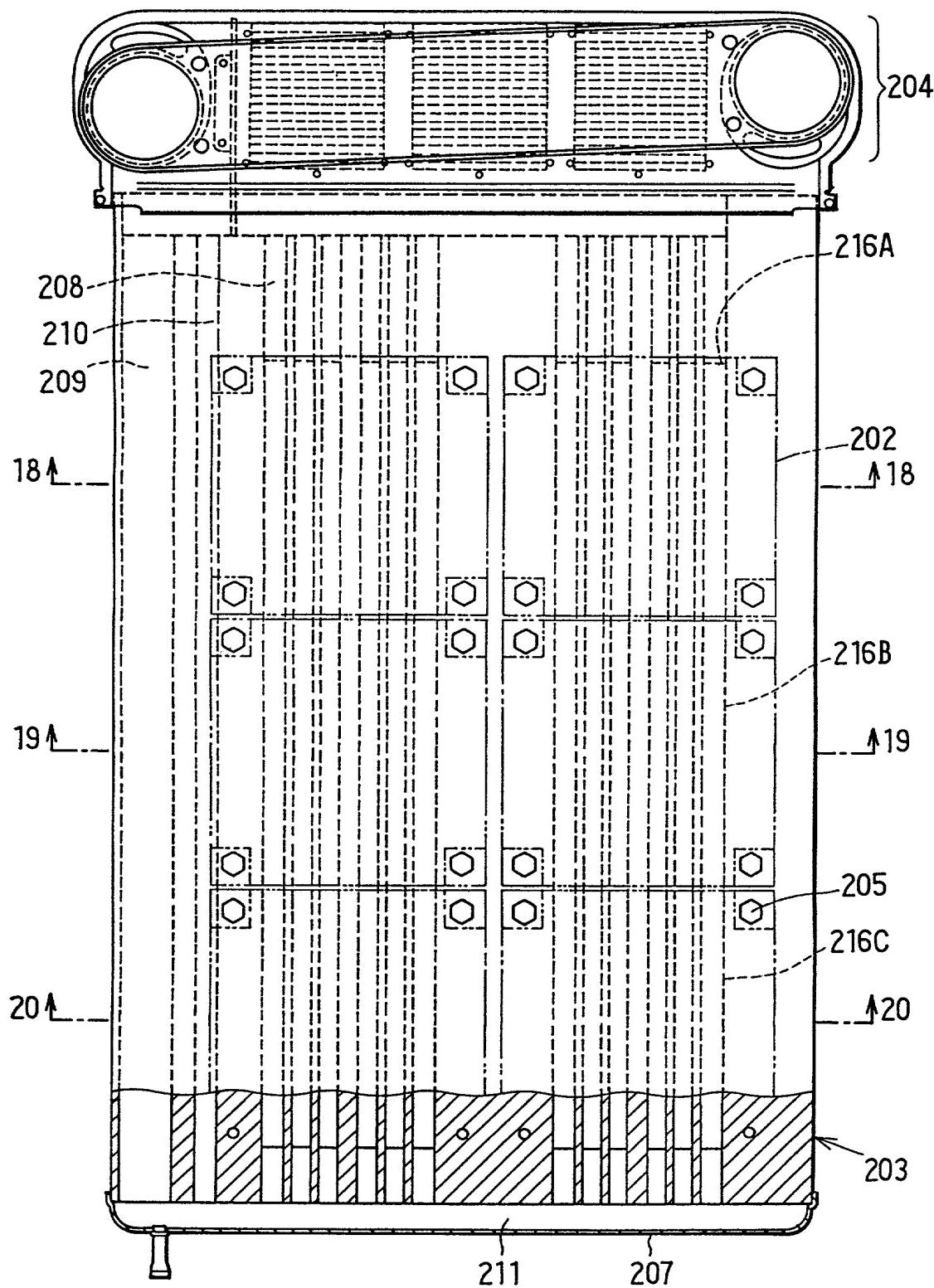
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Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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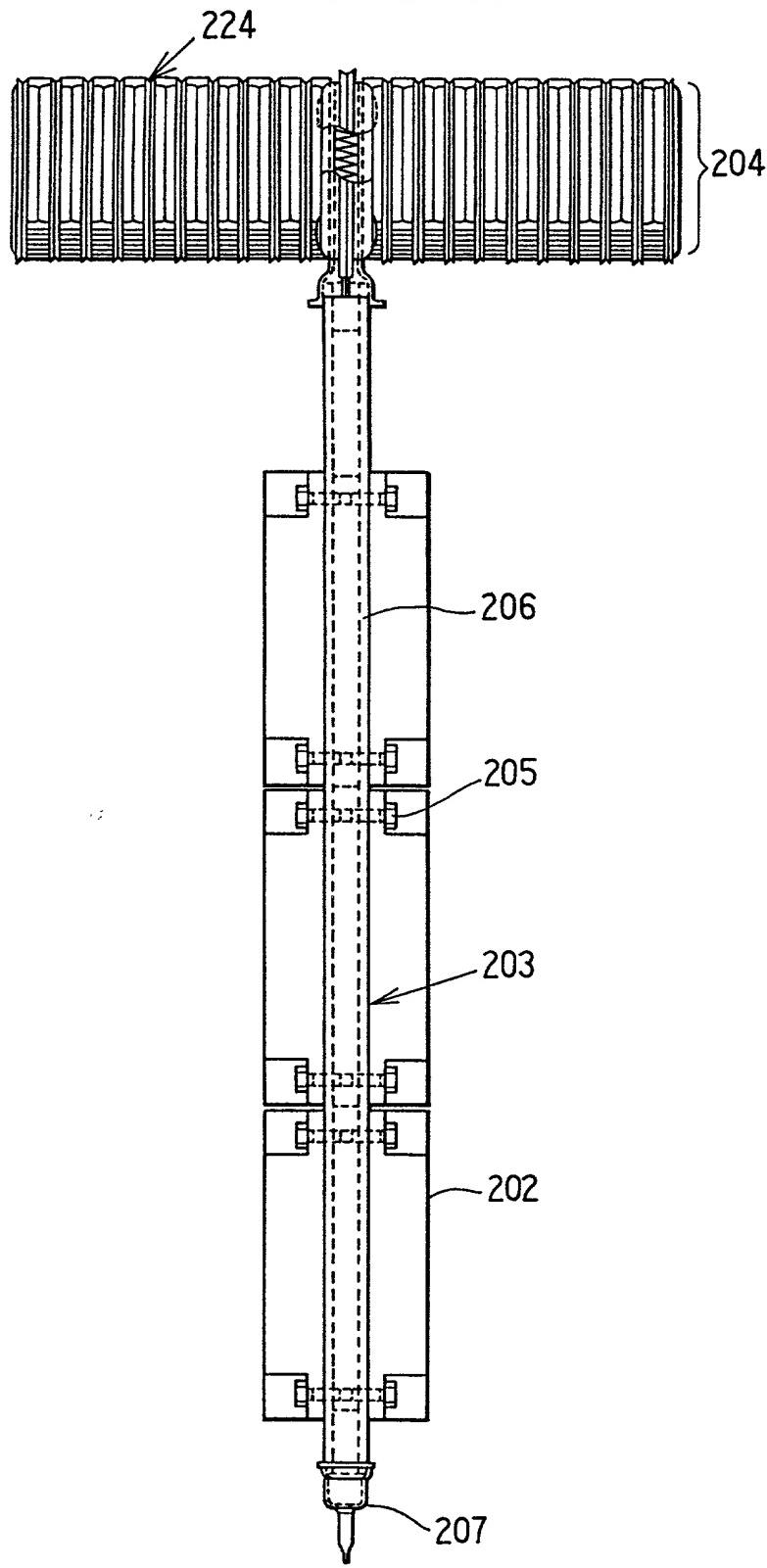
FIG. 16



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 17



Title: Cooling Apparatus Boiling and Condensing Refrigerant

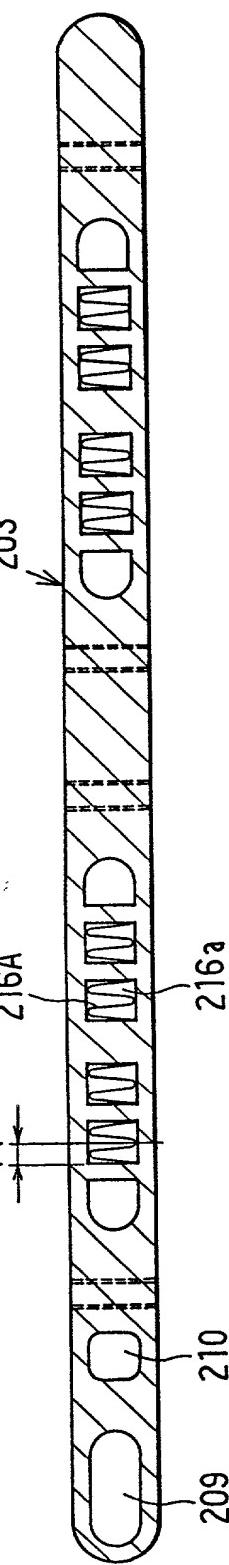
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

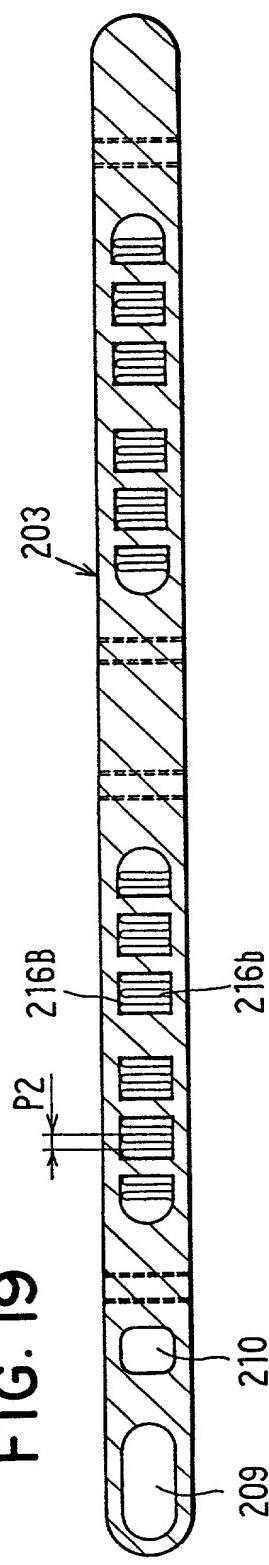
Atty. Ref. No.: 4041J0229DVA

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**FIG. 18**



**FIG. 19**



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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FIG. 20

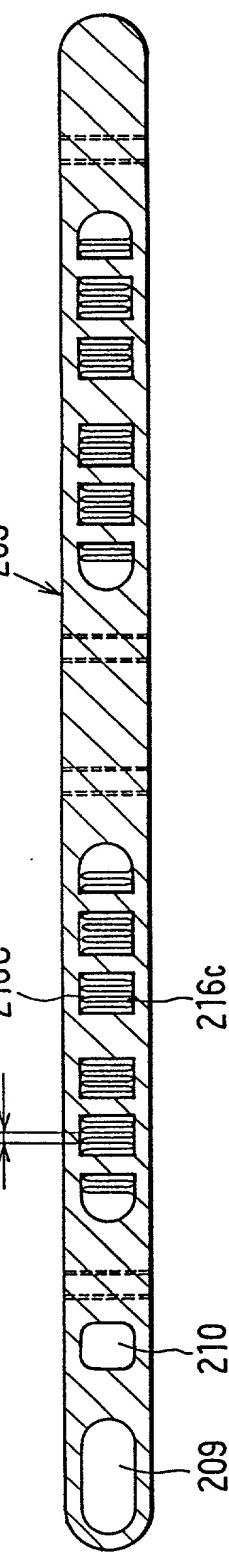
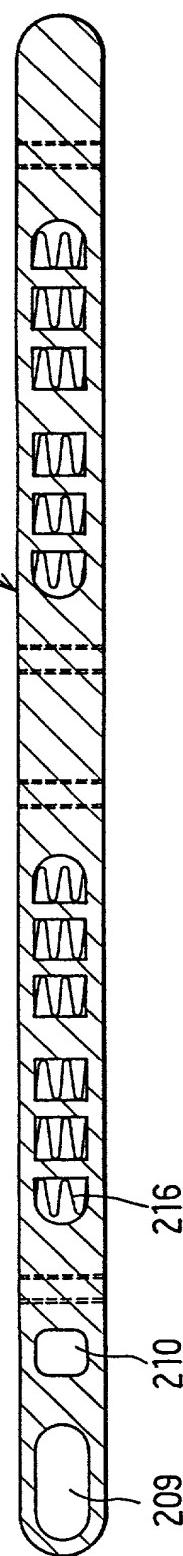


FIG. 21



Title: Cooling Apparatus Boiling and Condensing Refrigerant

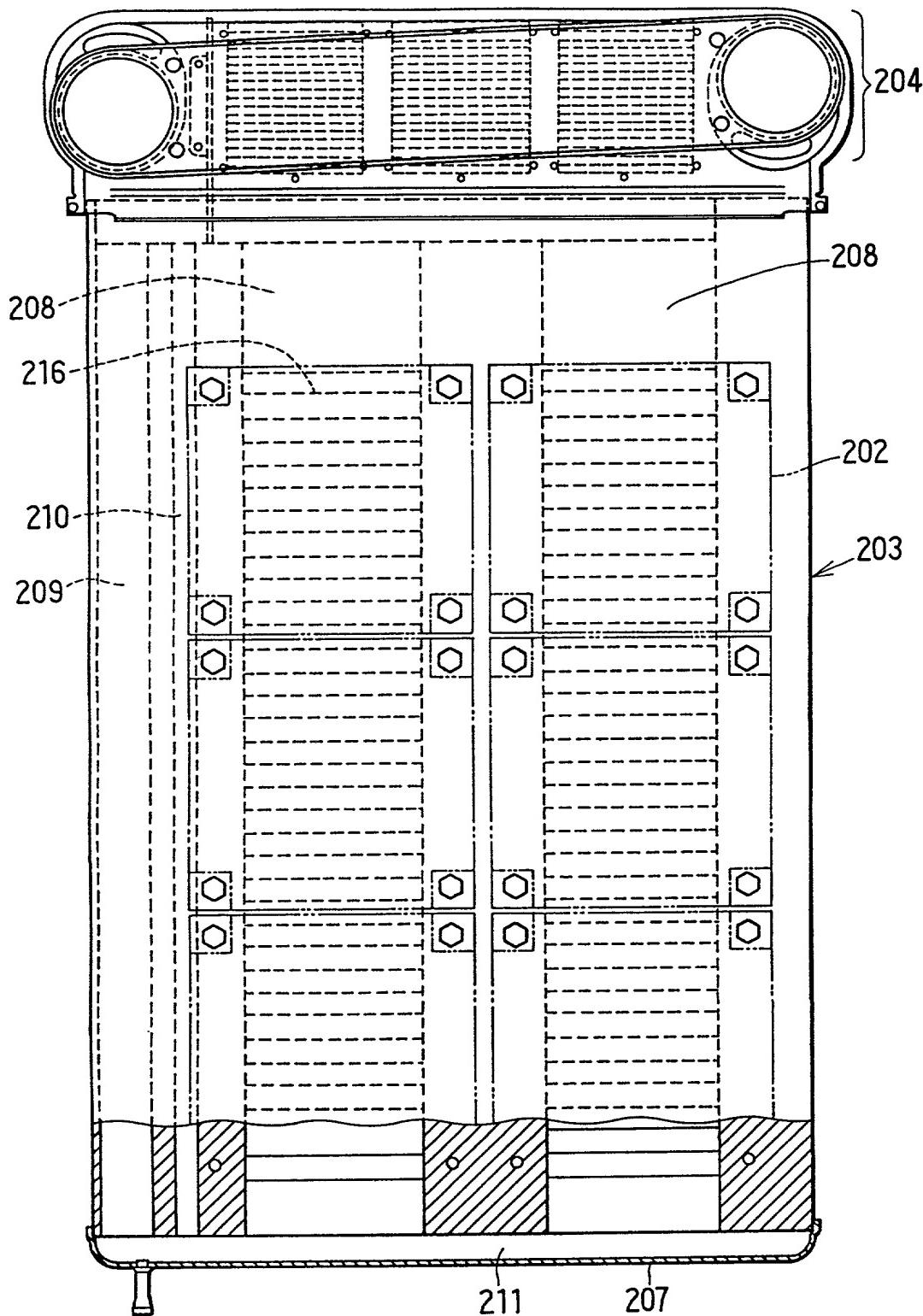
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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## FIG. 22



Title: Cooling Apparatus Boiling and Condensing Refrigerant

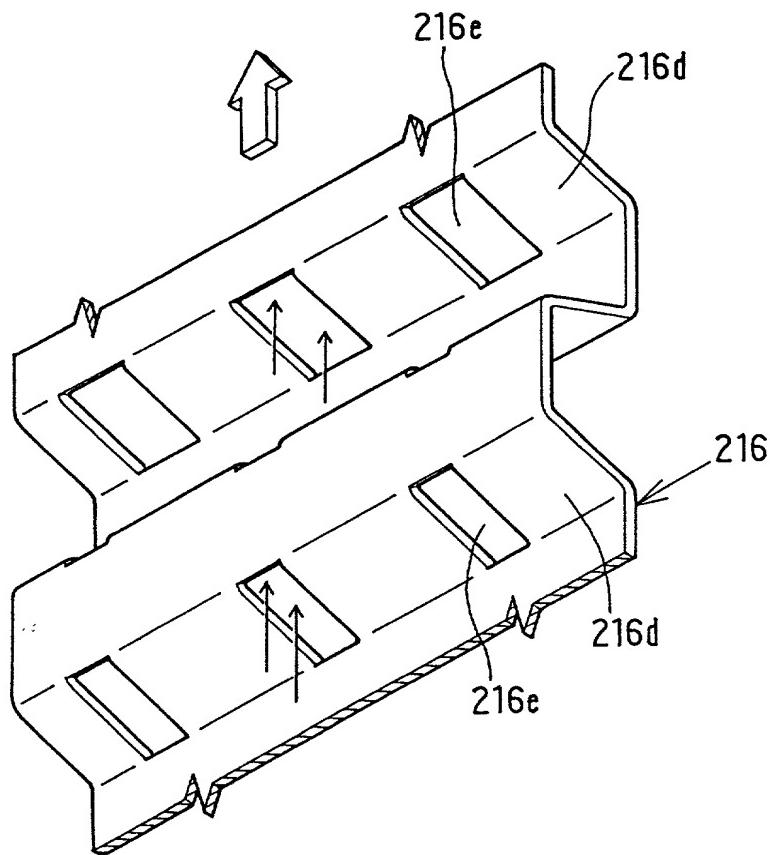
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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## FIG. 23



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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## FIG. 24

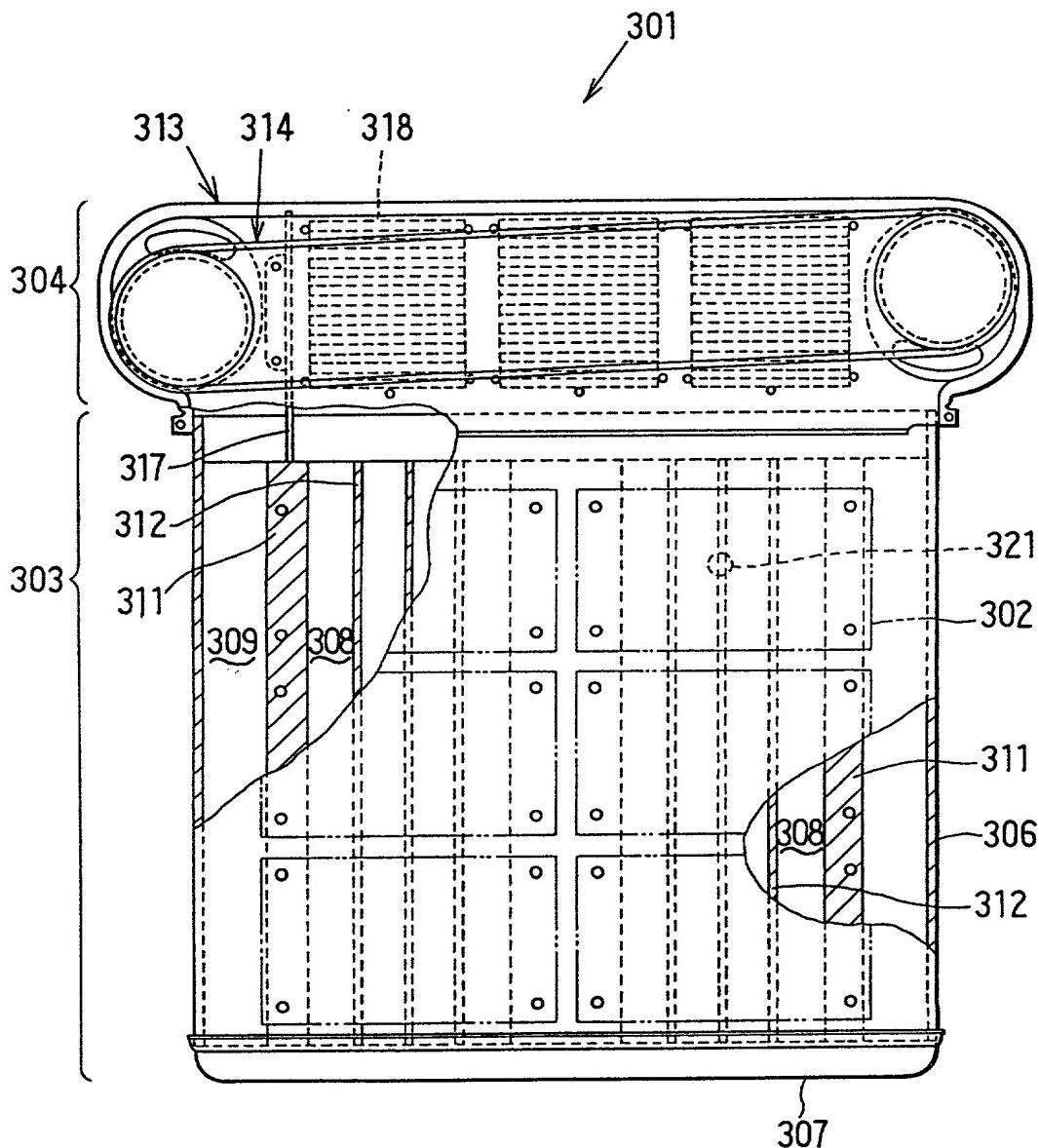
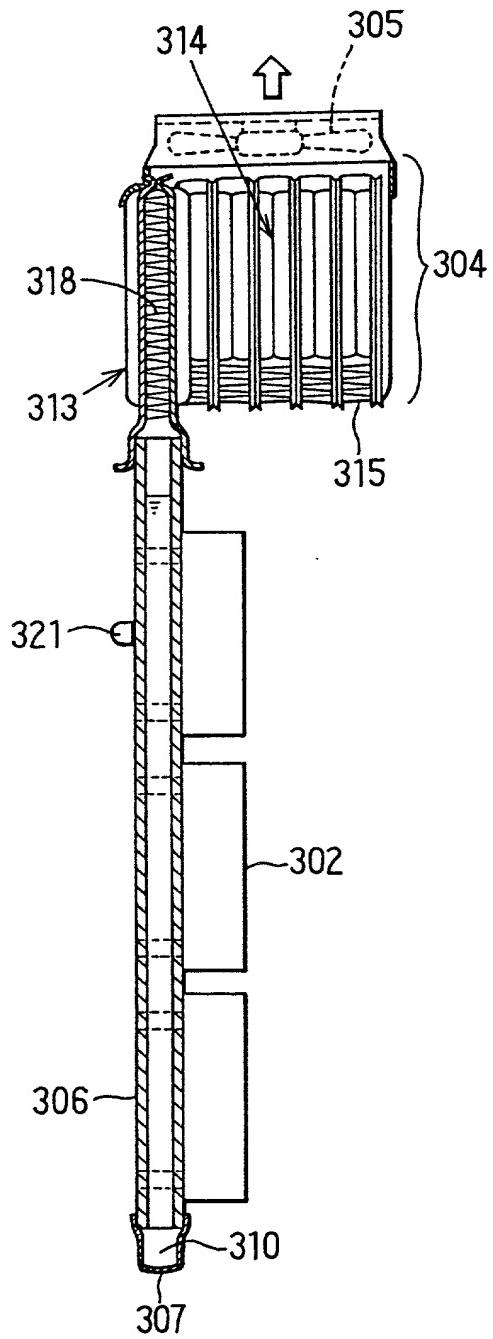


FIG. 25



Title: Cooling Apparatus Boiling and Condensing Refrigerant

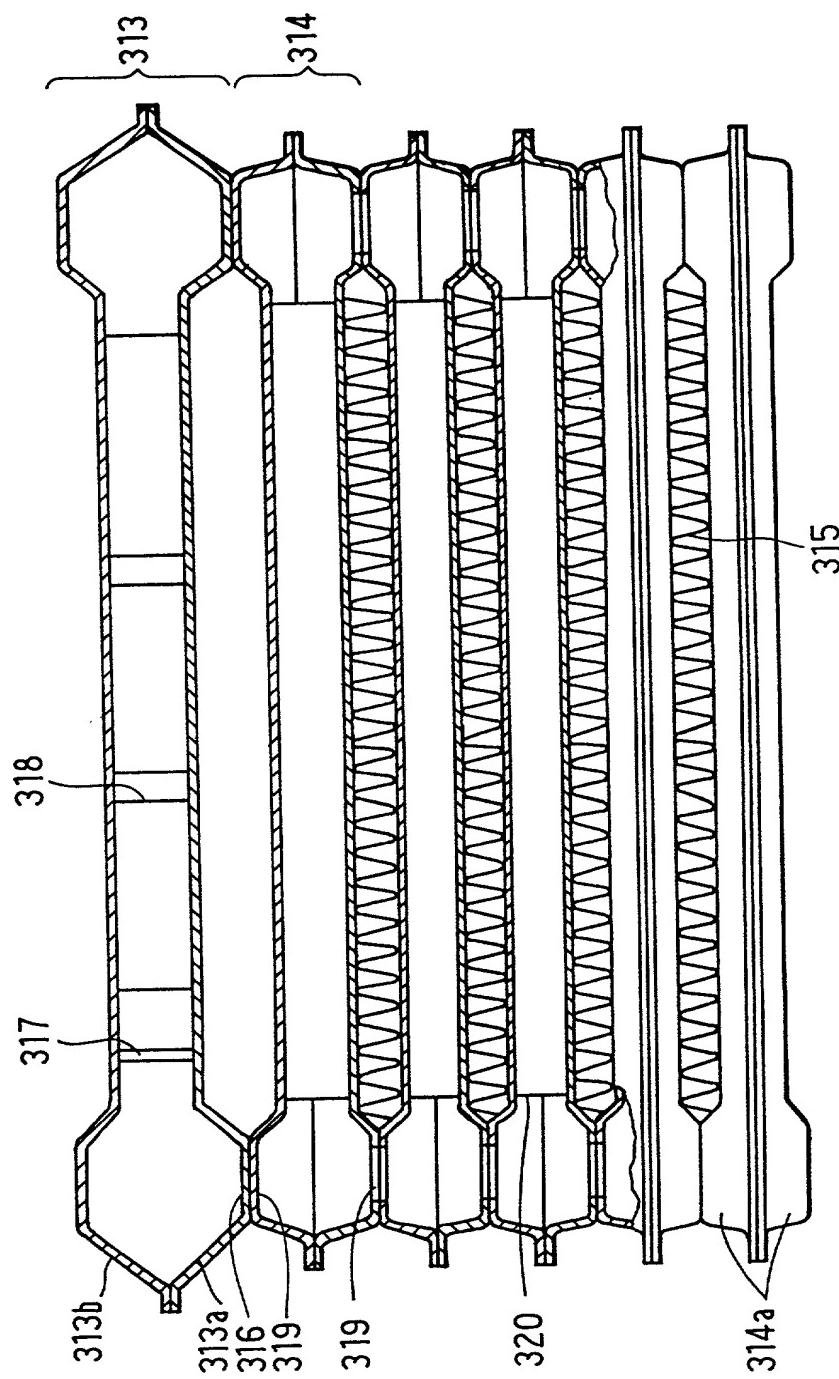
Inventor: Hiroyuki Osakabe

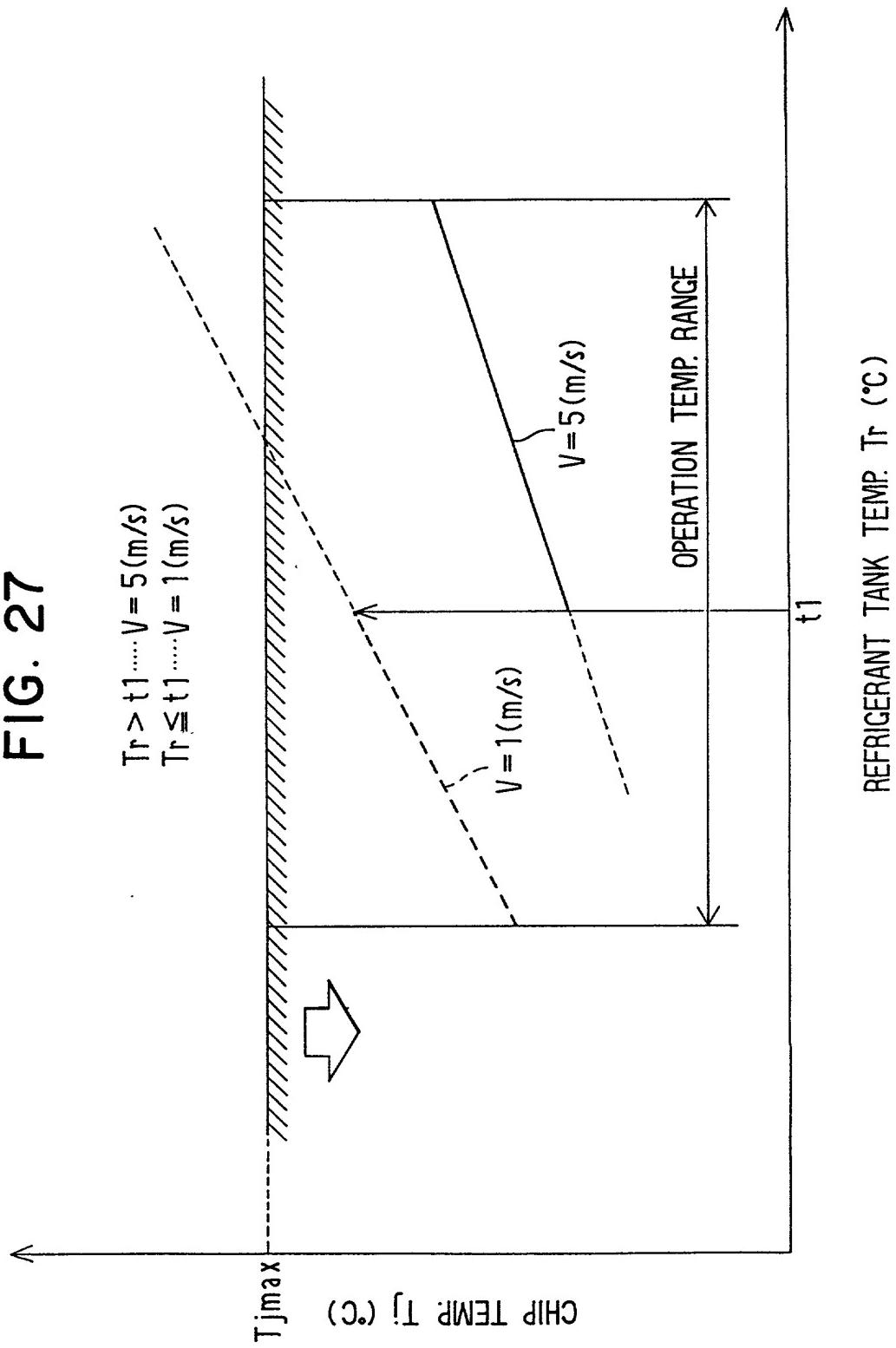
Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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FIG. 26



**FIG. 27**

Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 28

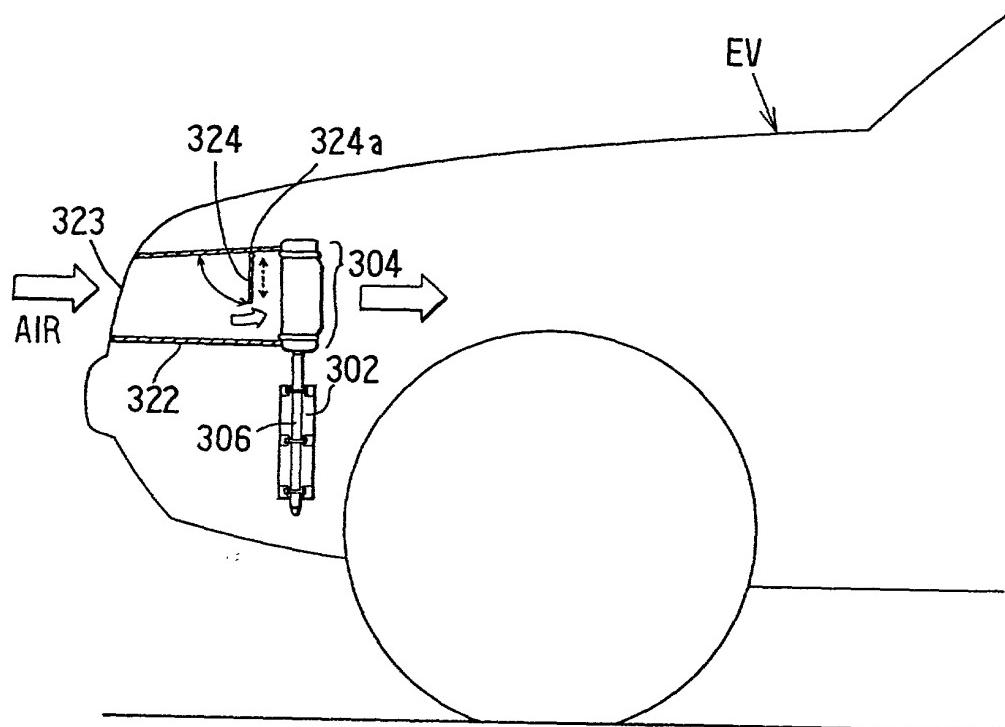


FIG. 29

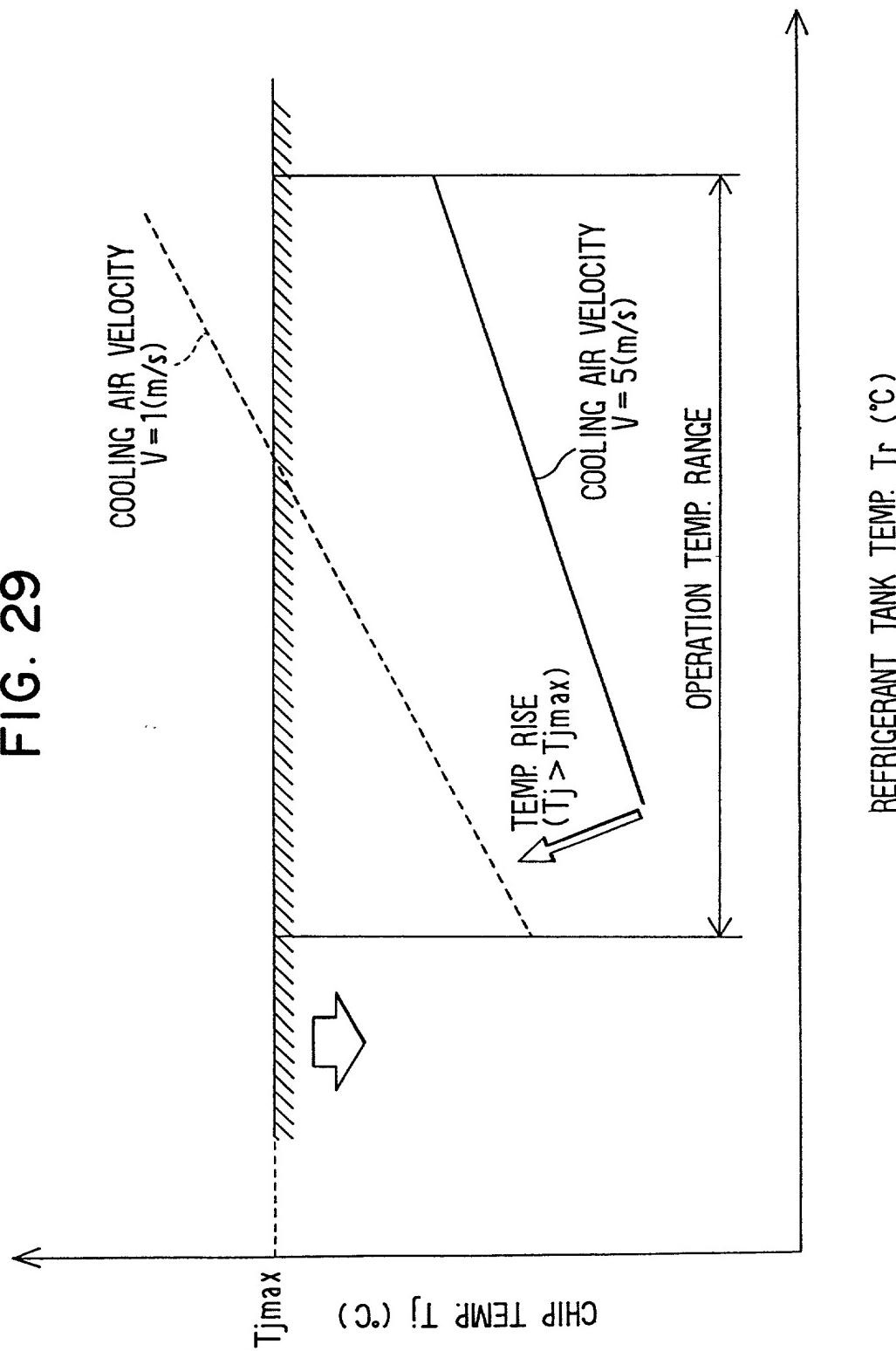
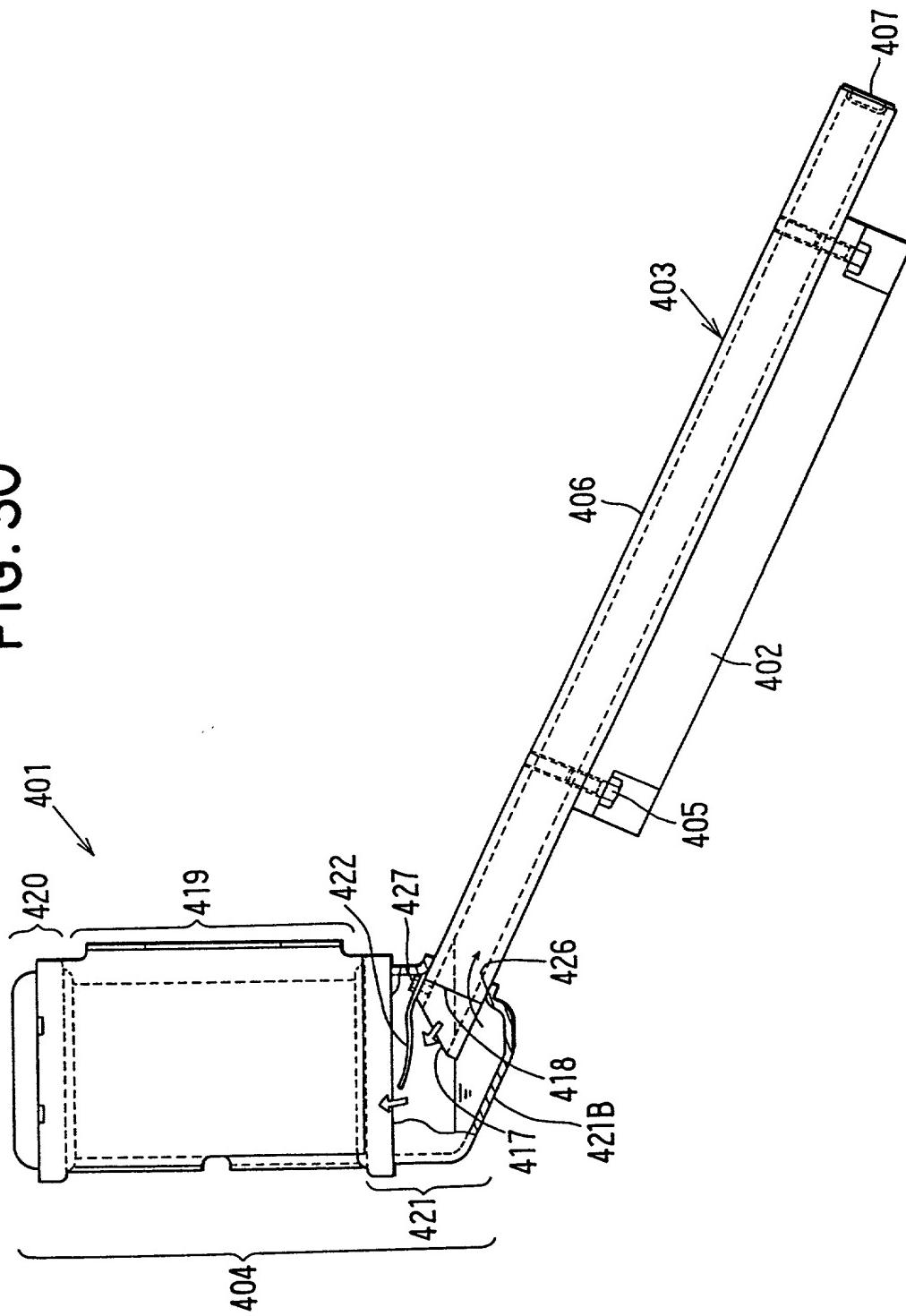


FIG. 30



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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**FIG. 31**

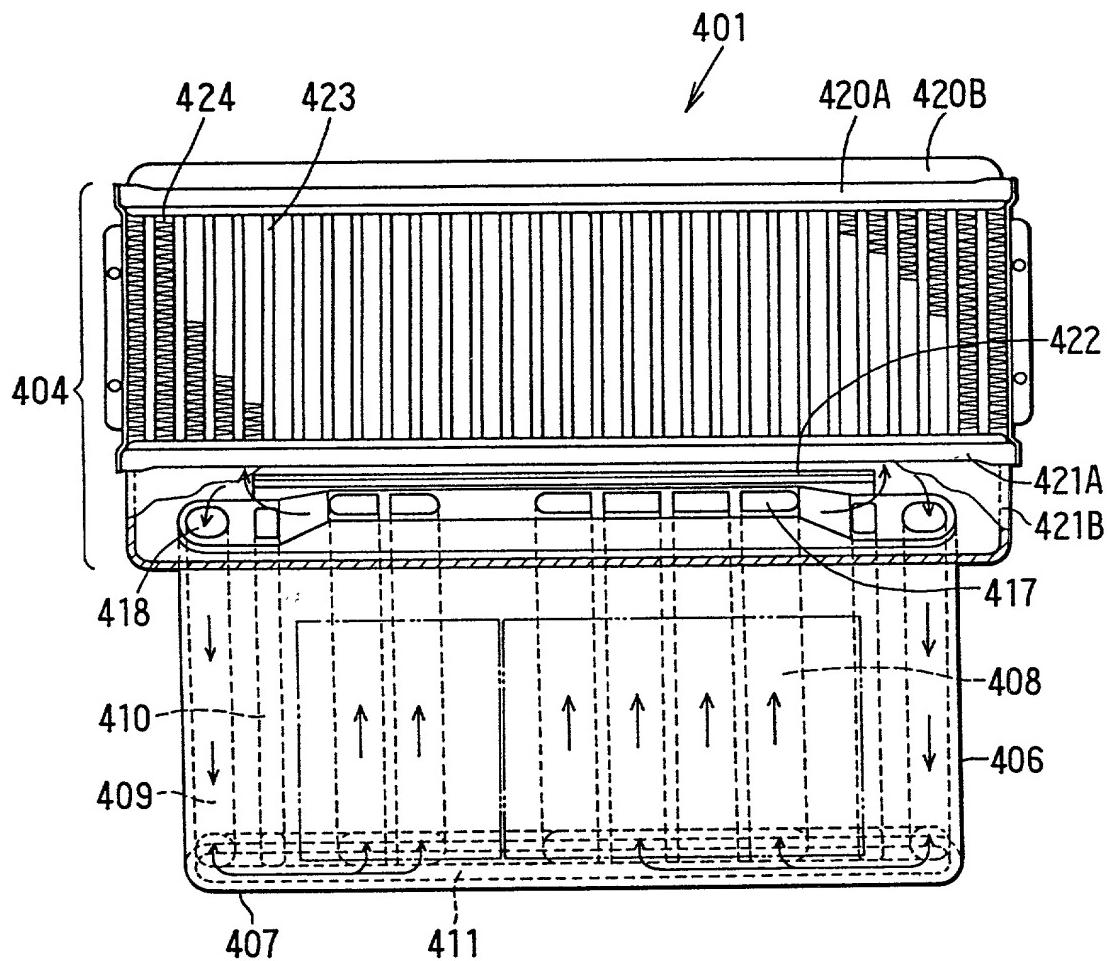


FIG. 32A

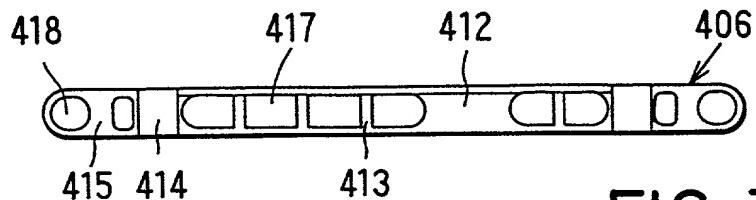


FIG. 32C

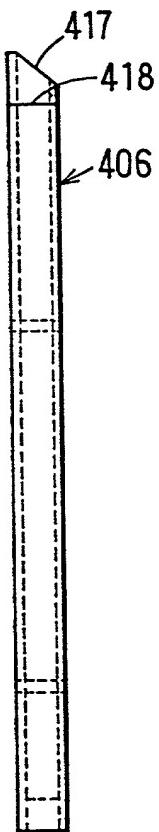
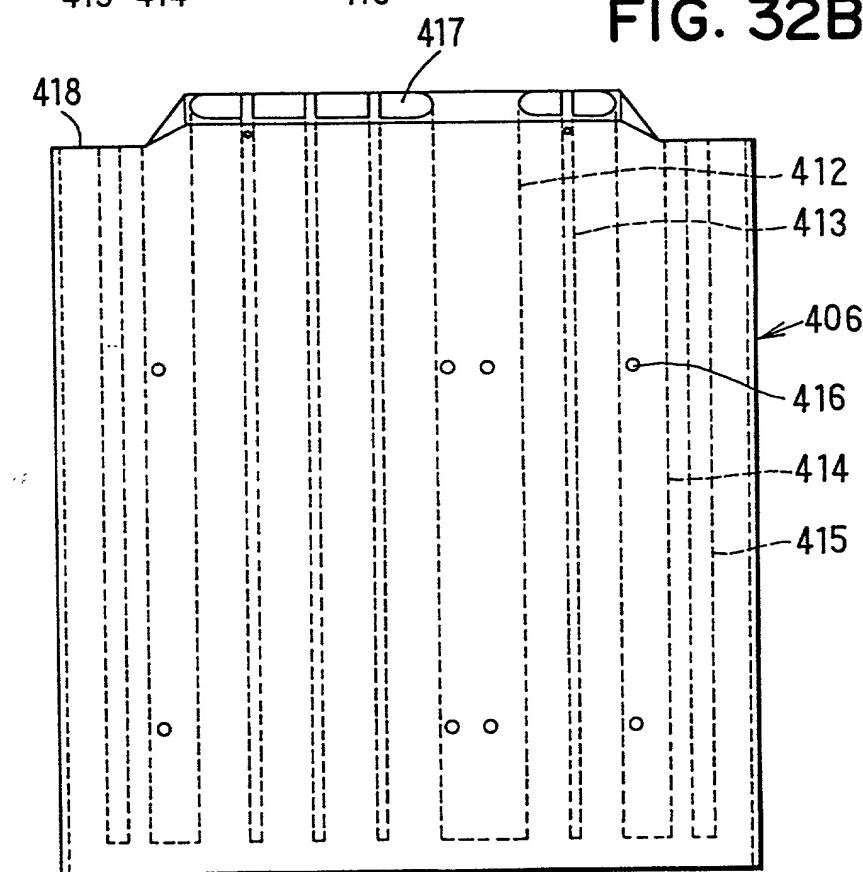
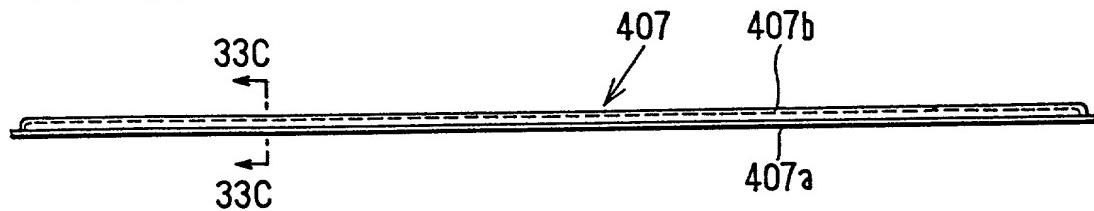


FIG. 32B

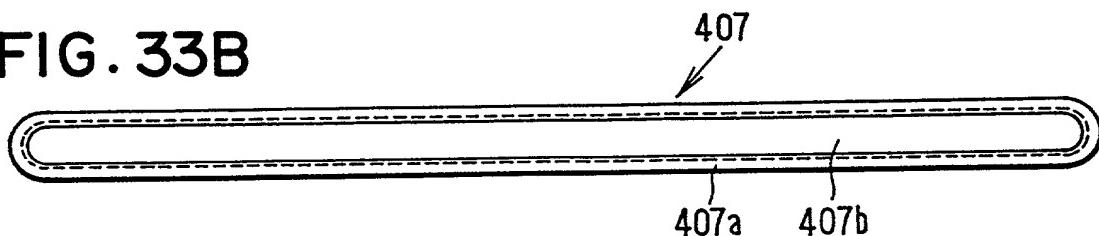


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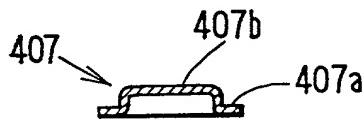
**FIG. 33A**



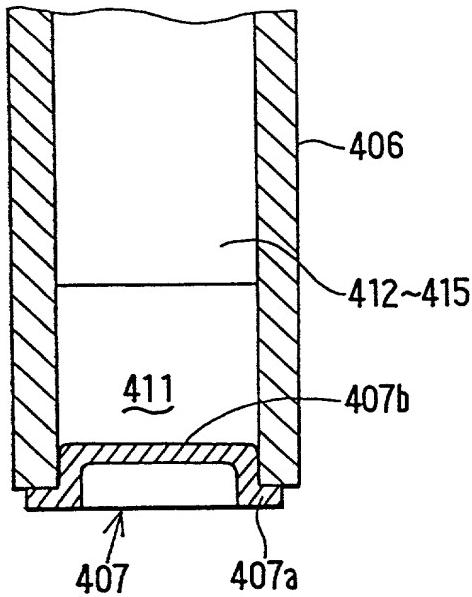
**FIG. 33B**



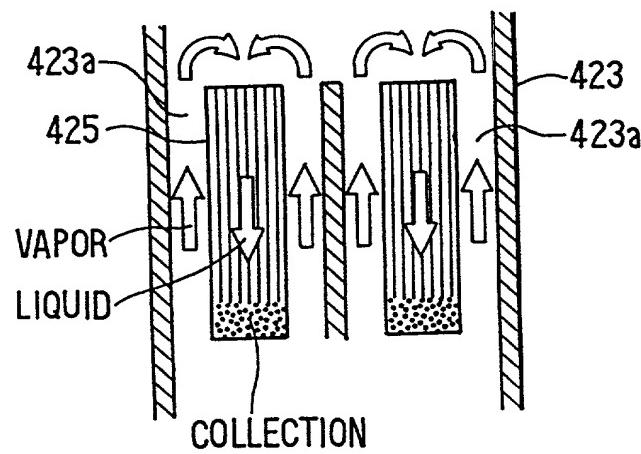
**FIG. 33C**



**FIG. 34**



**FIG. 35**



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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FIG. 36A

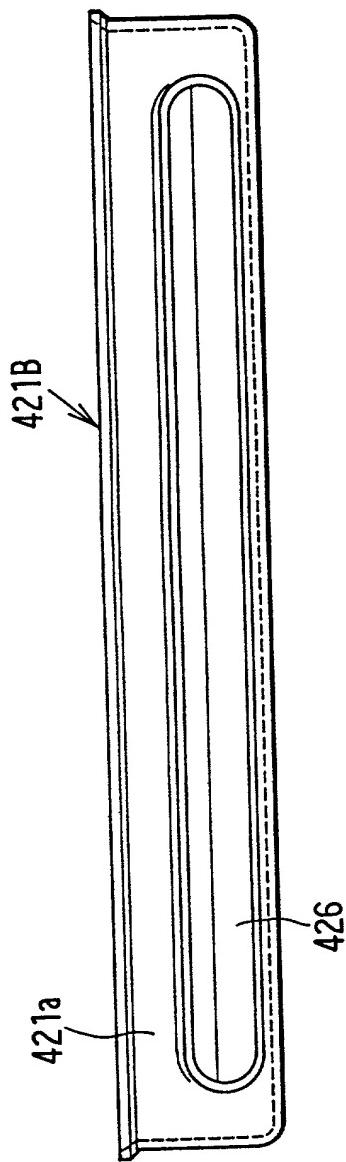


FIG. 36B

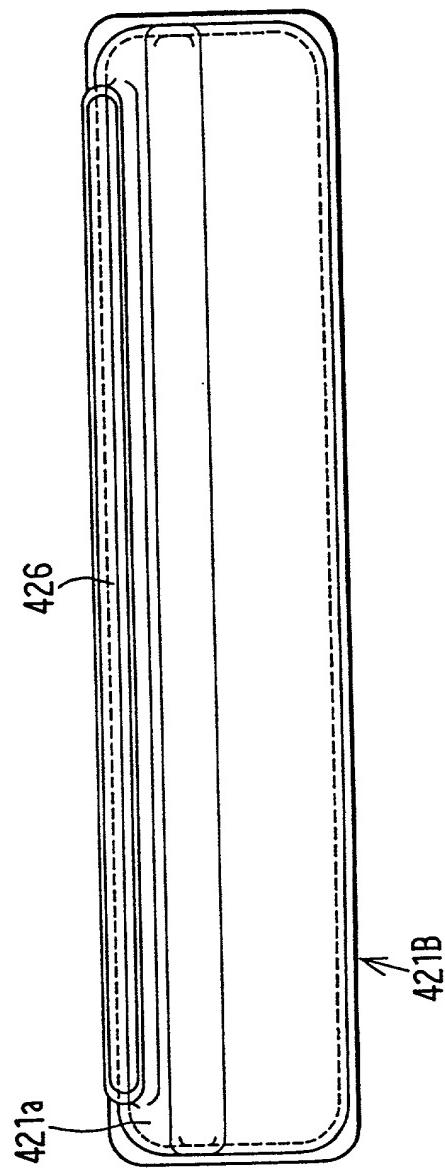
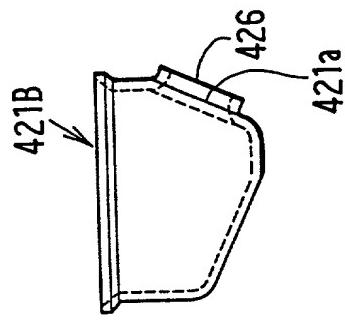


FIG. 36C



Title: Cooling Apparatus Boiling and Condensing Refrigerant

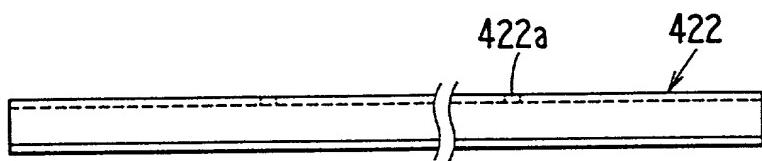
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

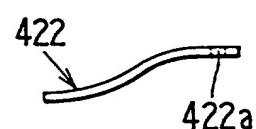
Atty. Ref. No.: 4041J0229DVA

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**FIG. 37A**



**FIG. 37B**



**FIG. 38**

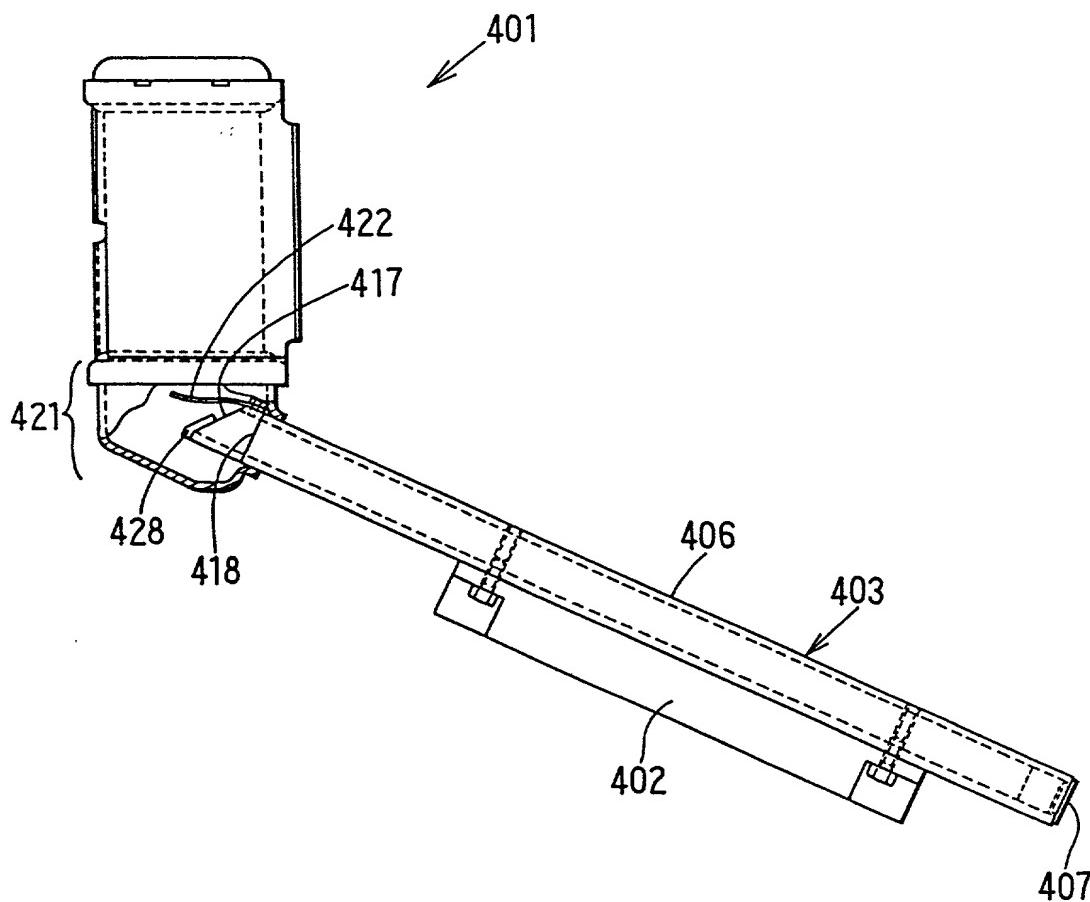


FIG. 39

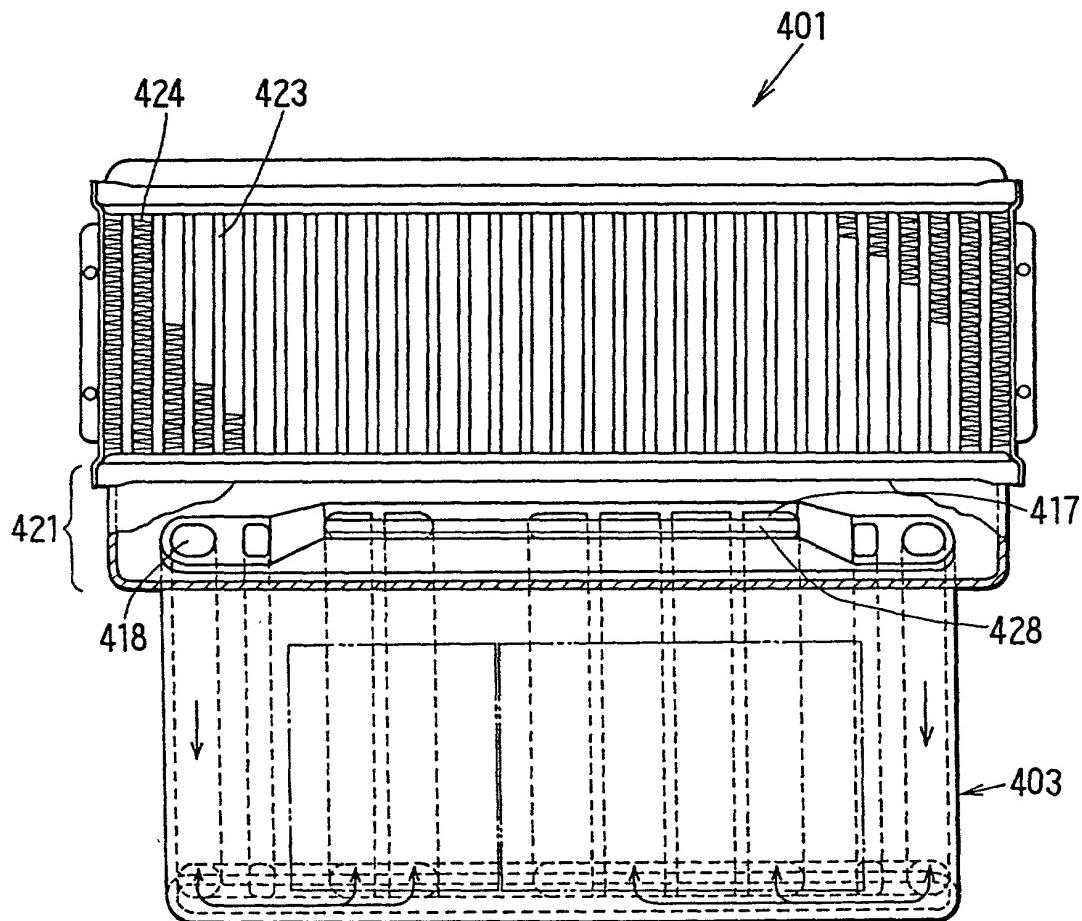


FIG. 40

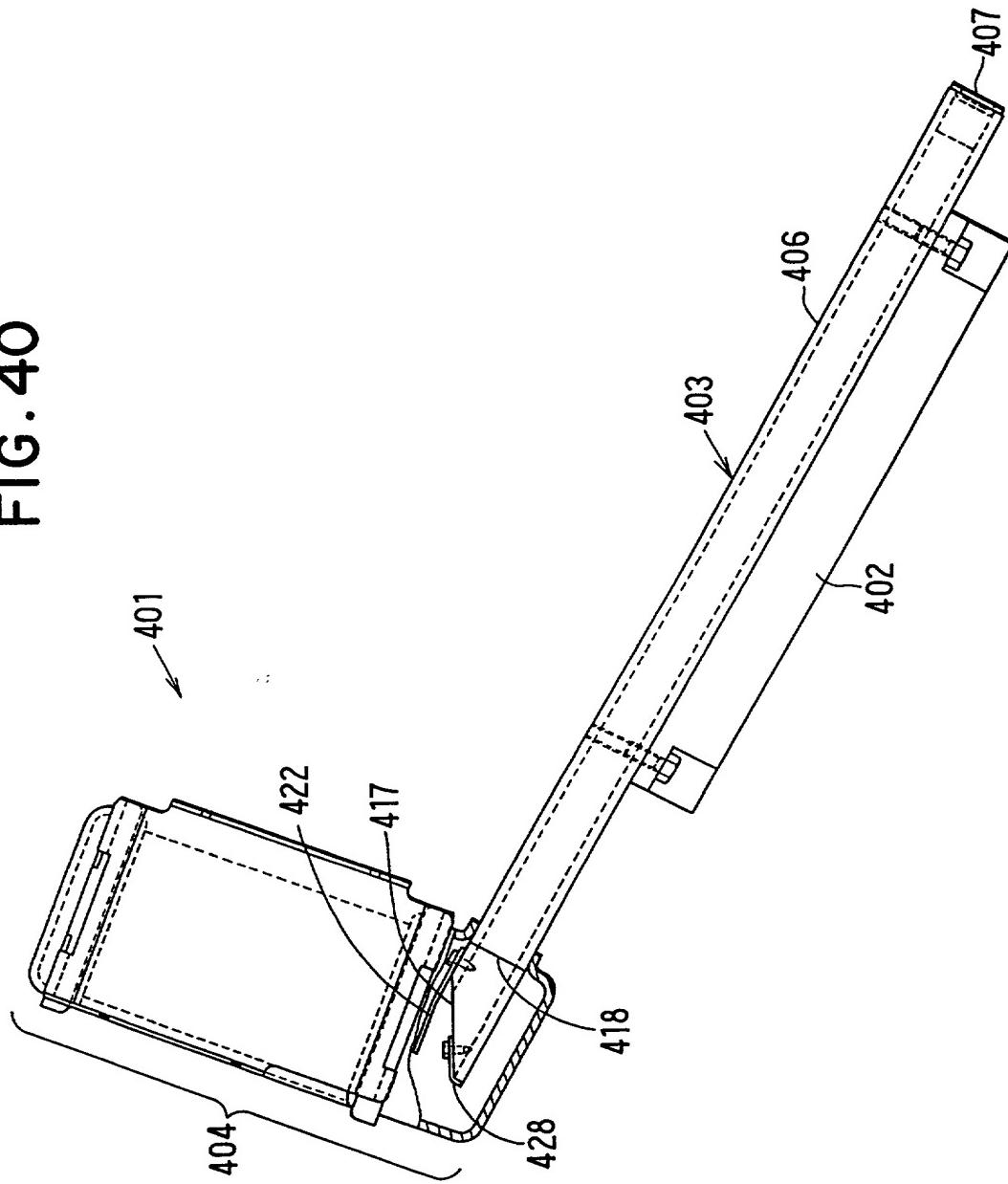
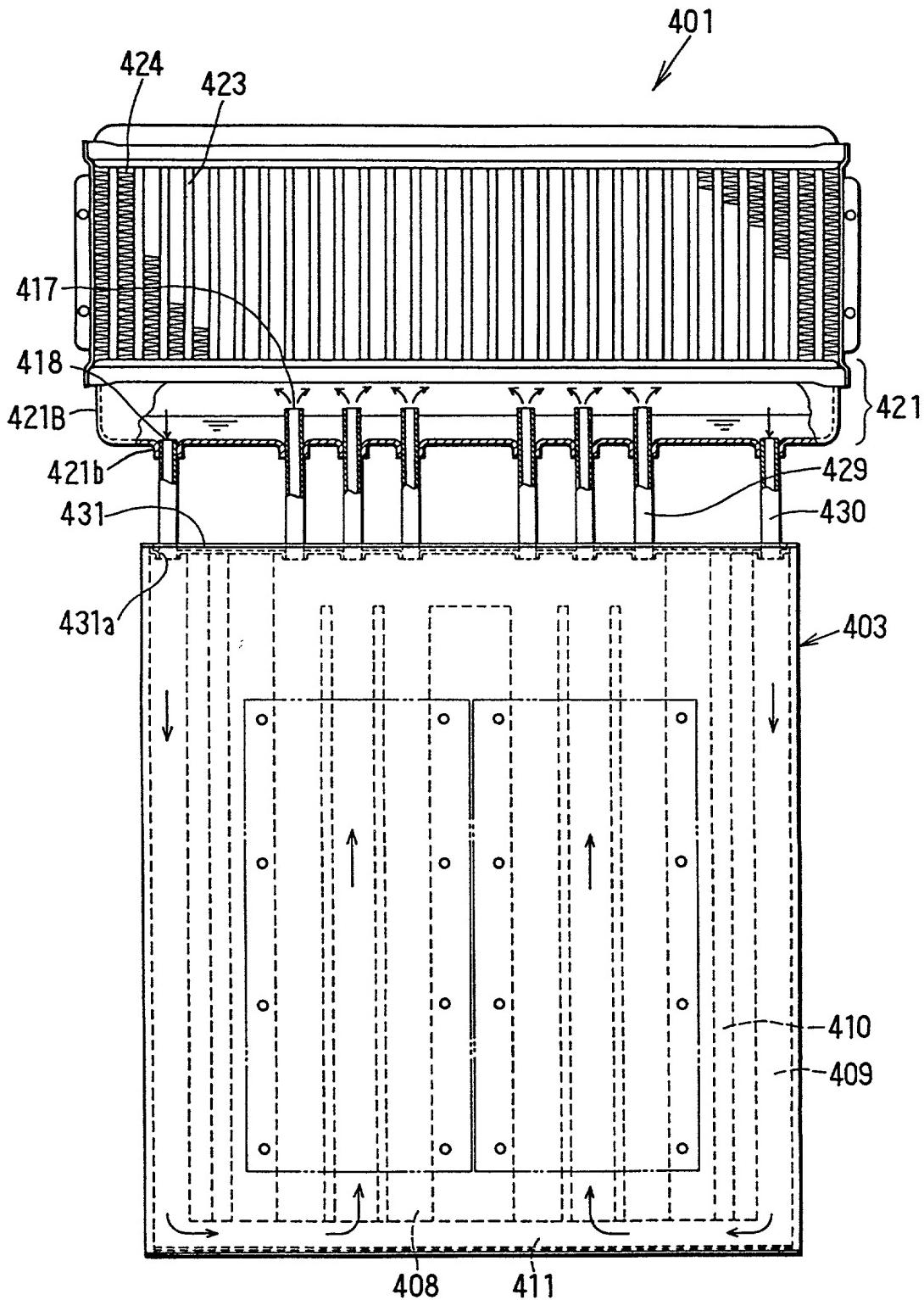


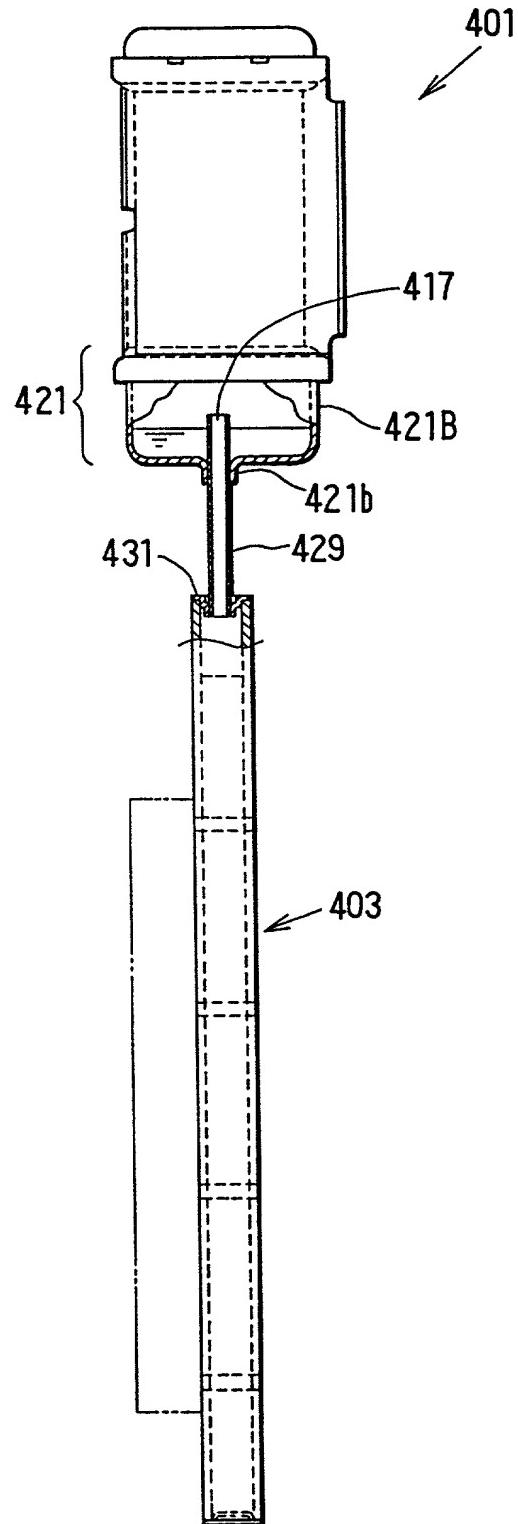
FIG. 4I



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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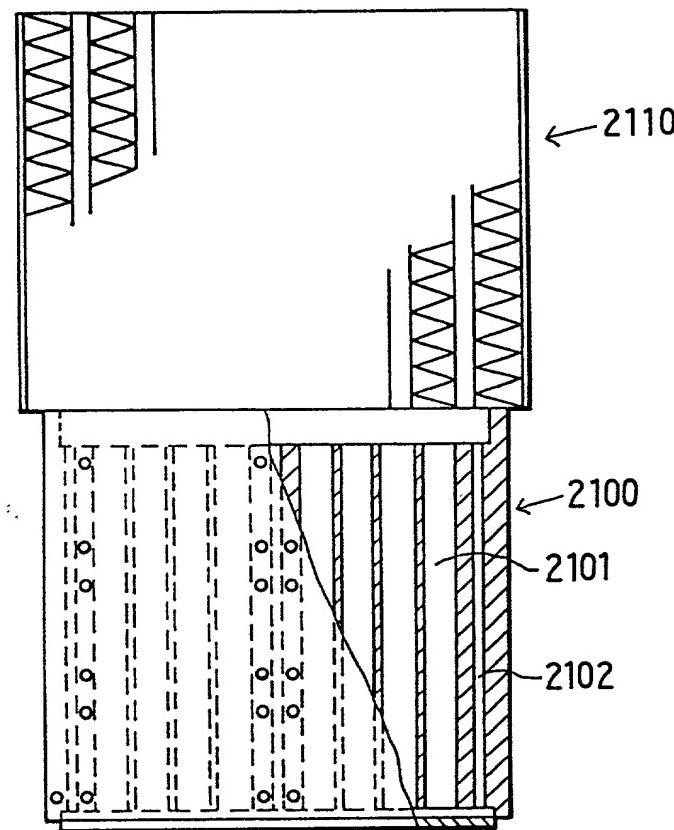
## FIG. 42



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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**FIG. 43**      PRIOR ART



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 40410229DVA  
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FIG. 44

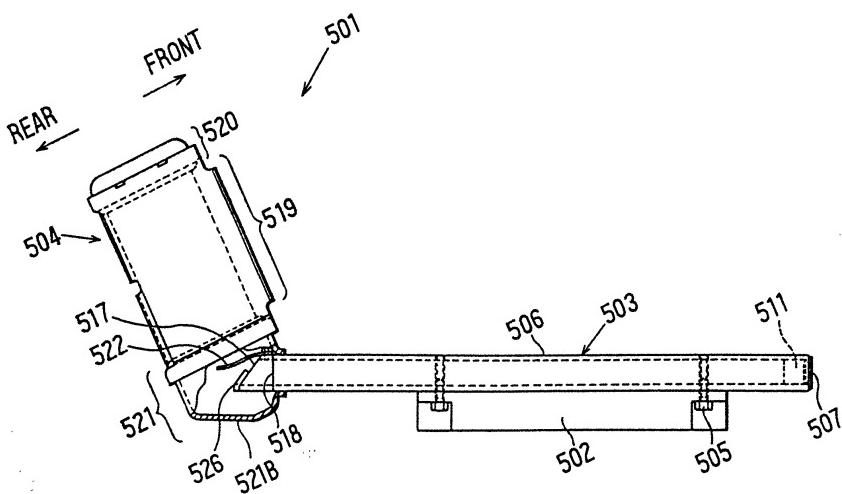
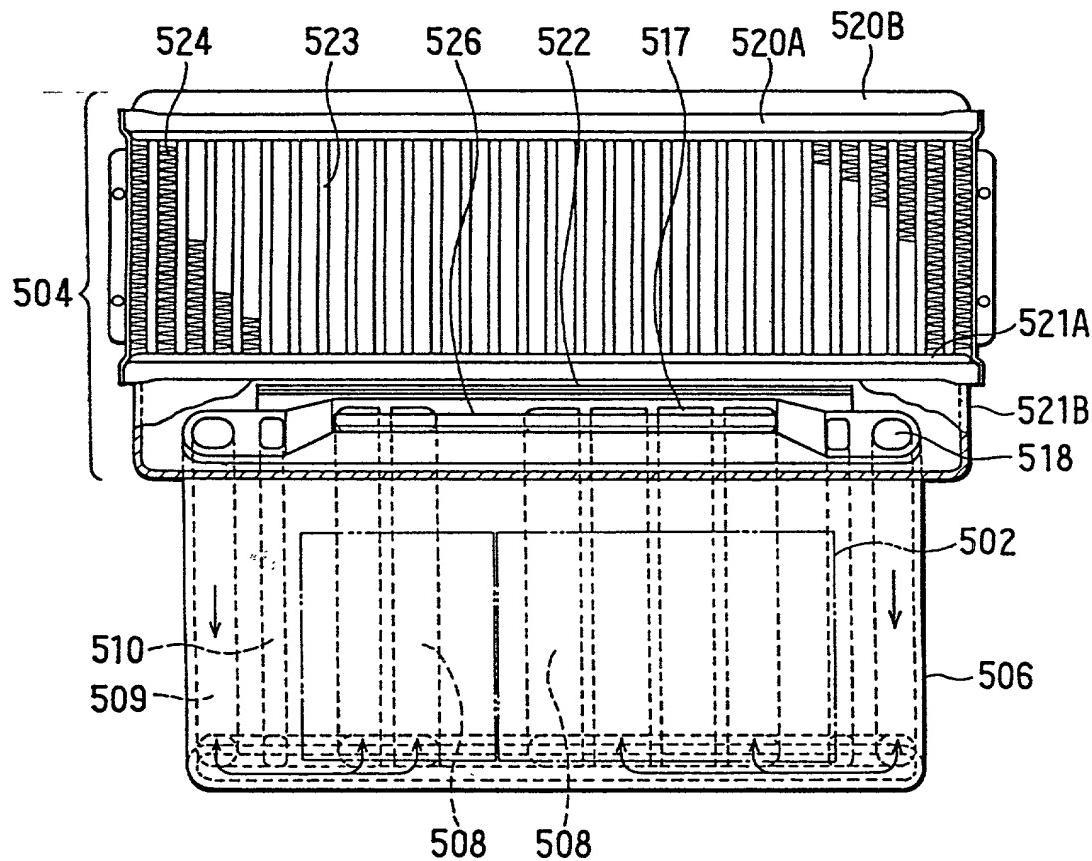


FIG. 45



Title: Cooling Apparatus Boiling and Condensing Refrigerant

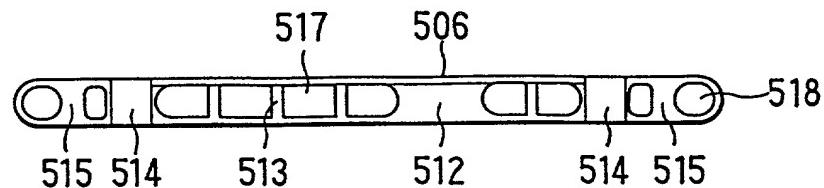
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

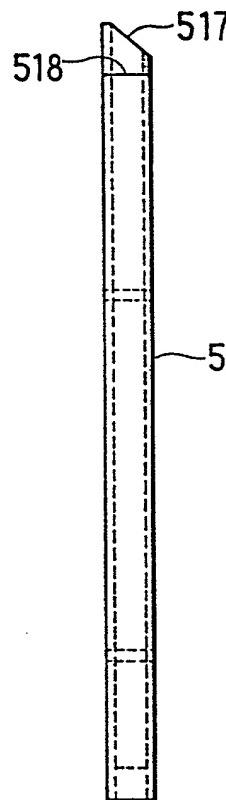
Atty. Ref. No.: 4041J0229DVA

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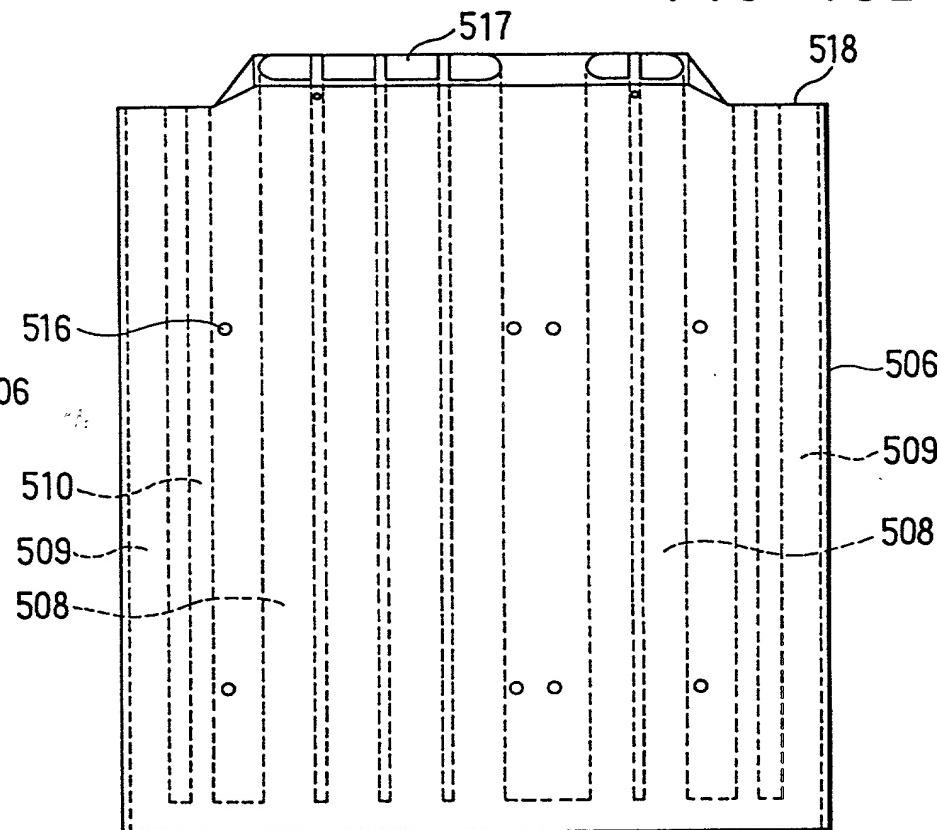
**FIG. 46A**



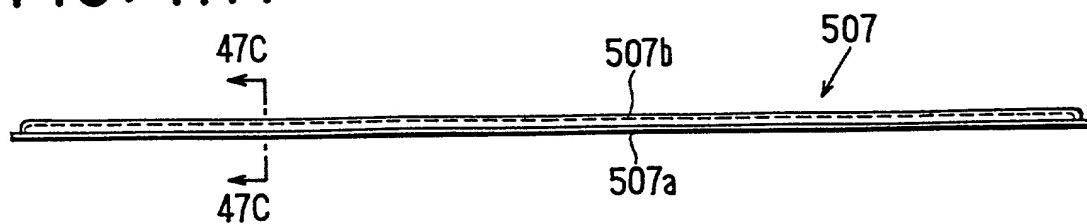
**FIG. 46C**



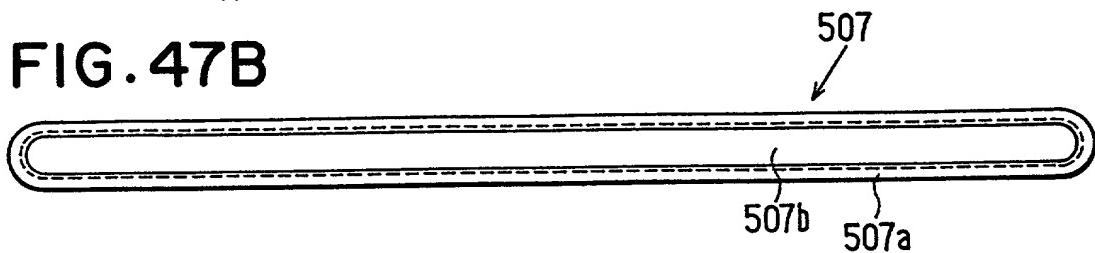
**FIG. 46B**



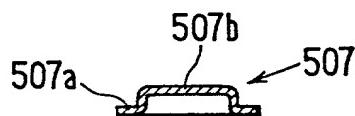
**FIG. 47A**



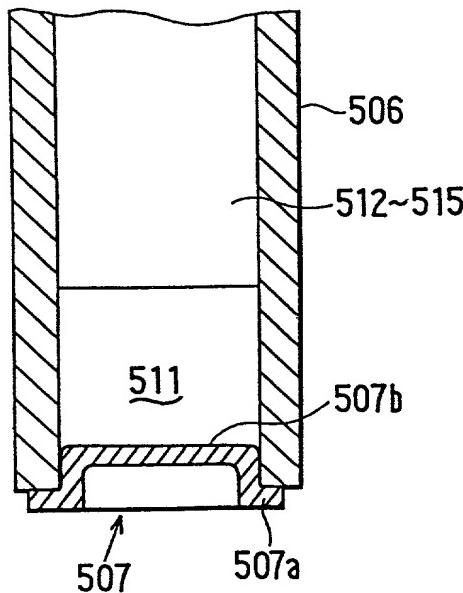
**FIG. 47B**



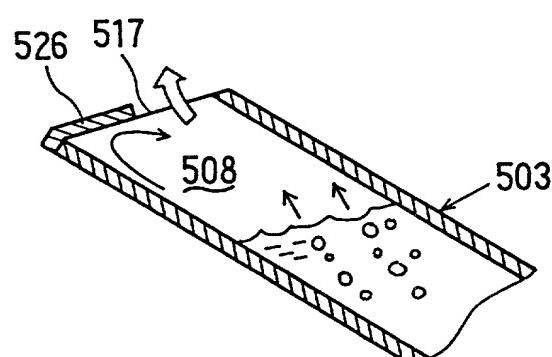
**FIG. 47C**



**FIG. 48**



**FIG. 50A**



**FIG. 50B**

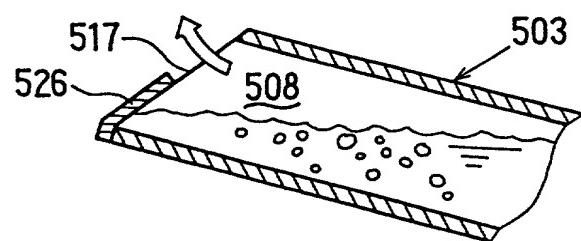


FIG. 49A

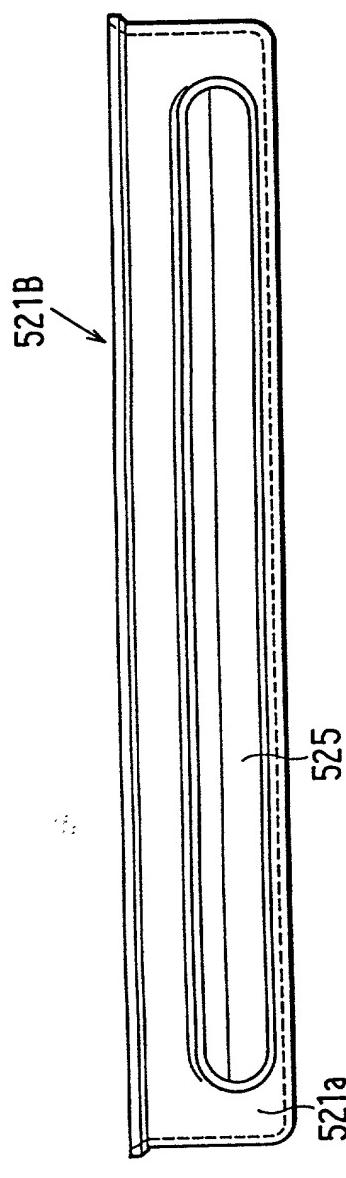


FIG. 49B

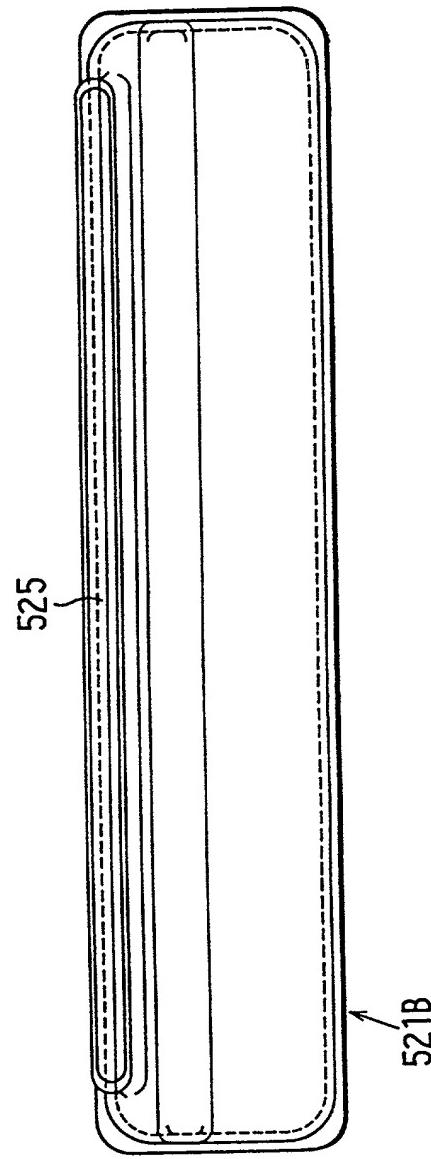
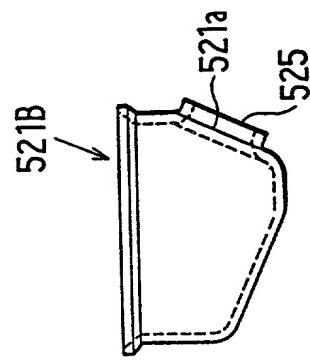


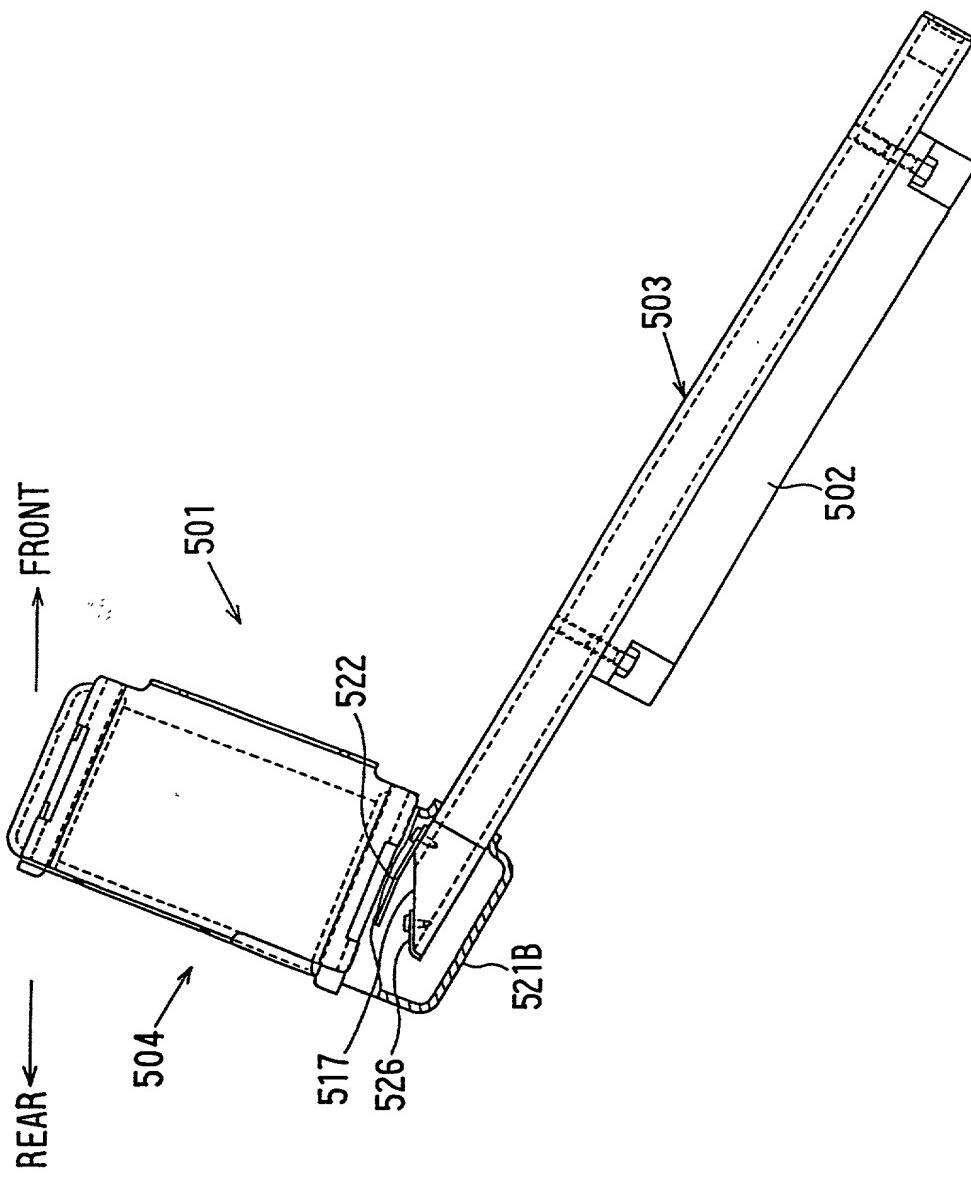
FIG. 49C



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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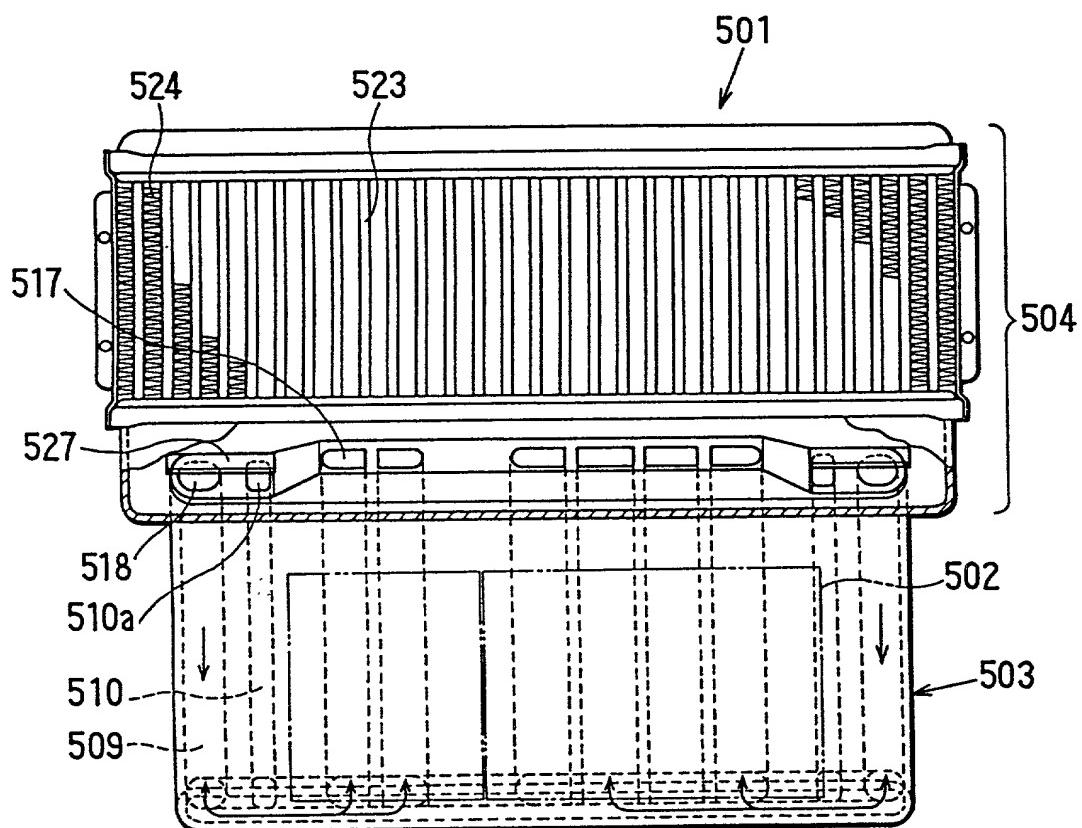
FIG. 5I



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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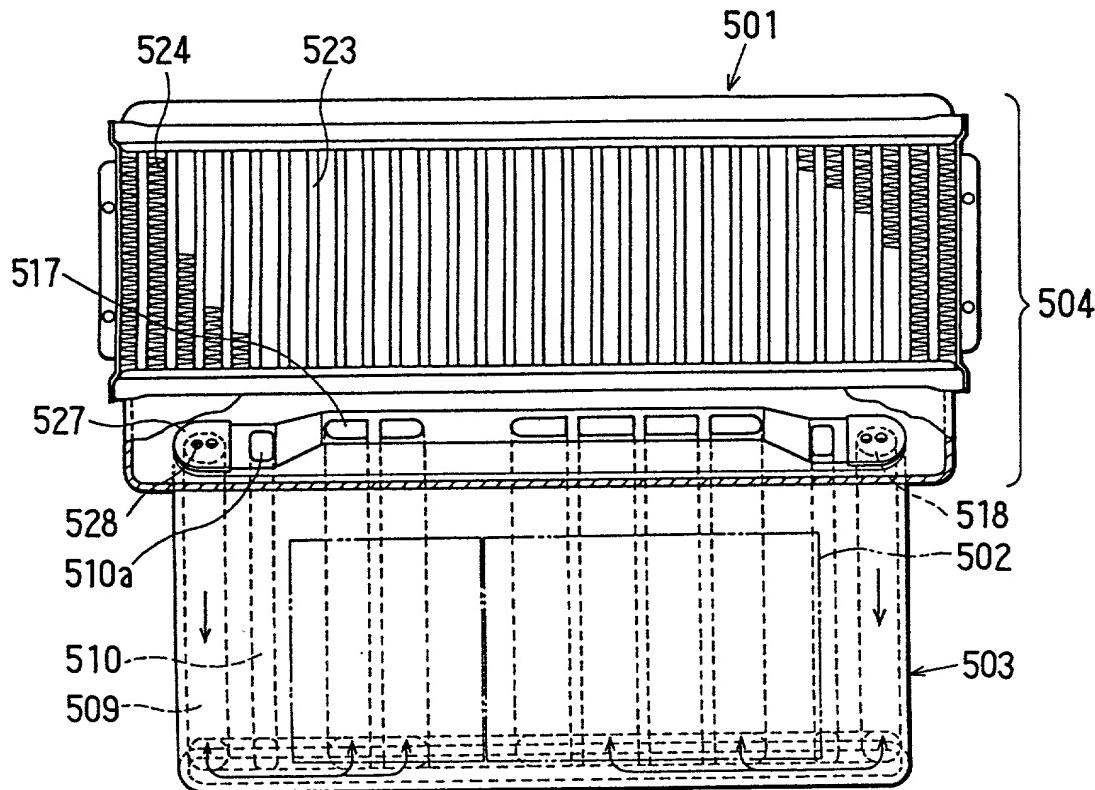
## FIG.52



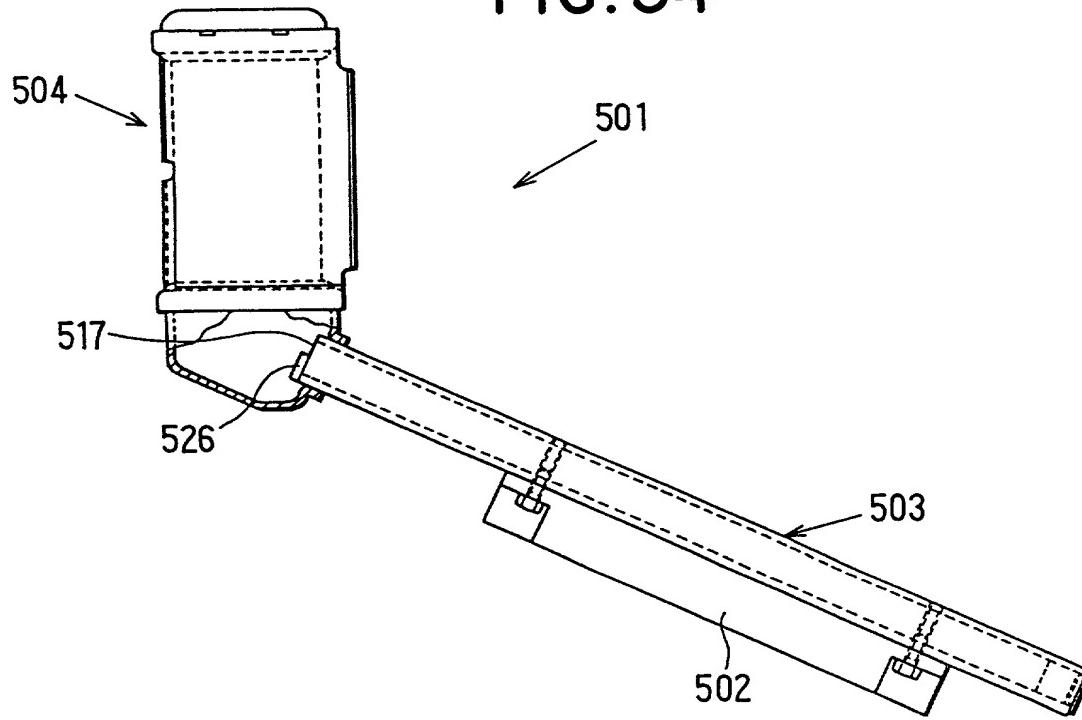
Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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## FIG. 53



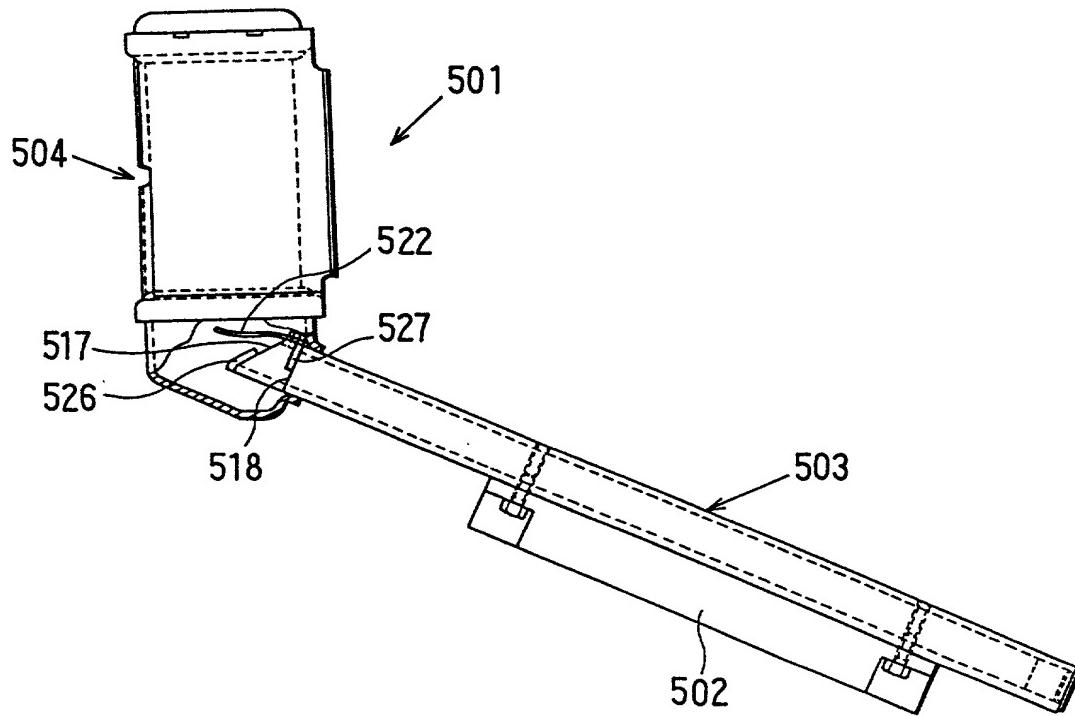
## FIG. 54



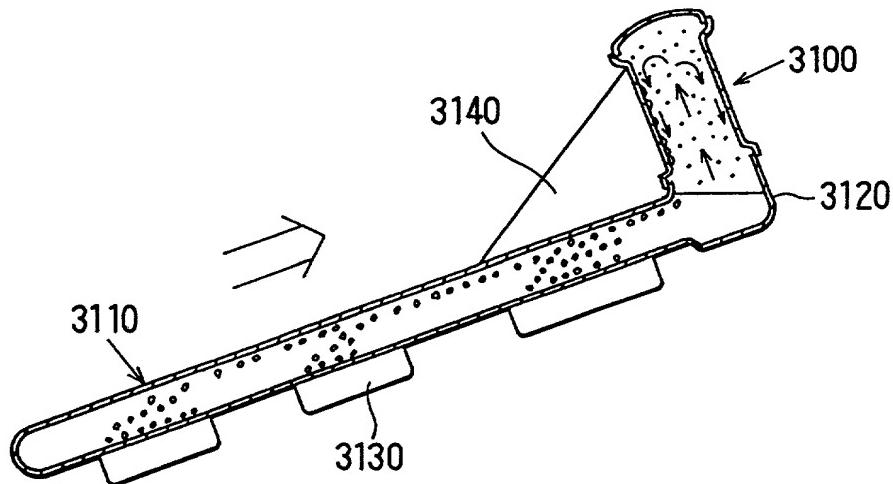
Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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## FIG. 55



## FIG. 56 PRIOR ART



Title: Cooling Apparatus Boiling and Condensing Refrigerant

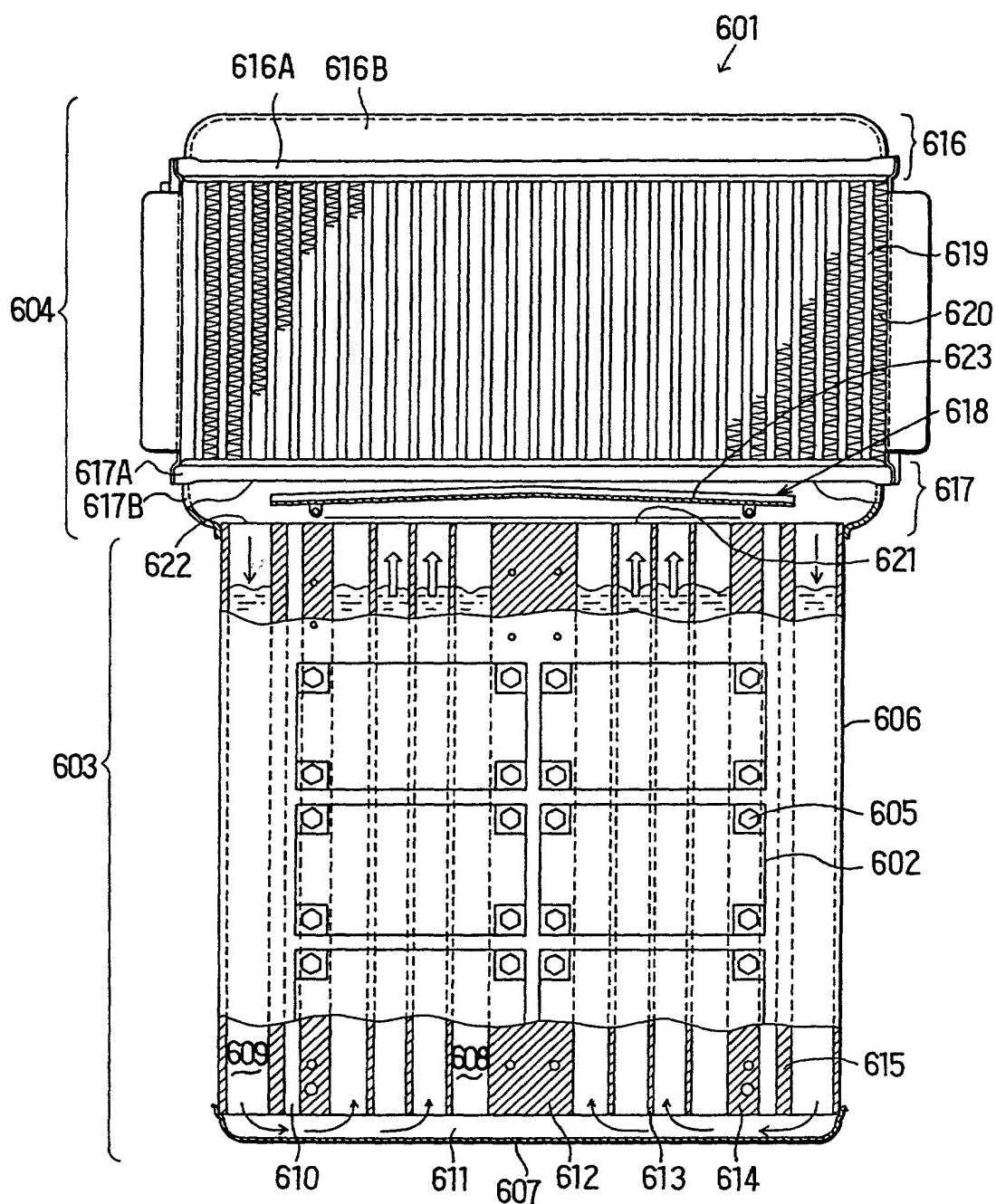
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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FIG. 57



Title: Cooling Apparatus Boiling and Condensing Refrigerant

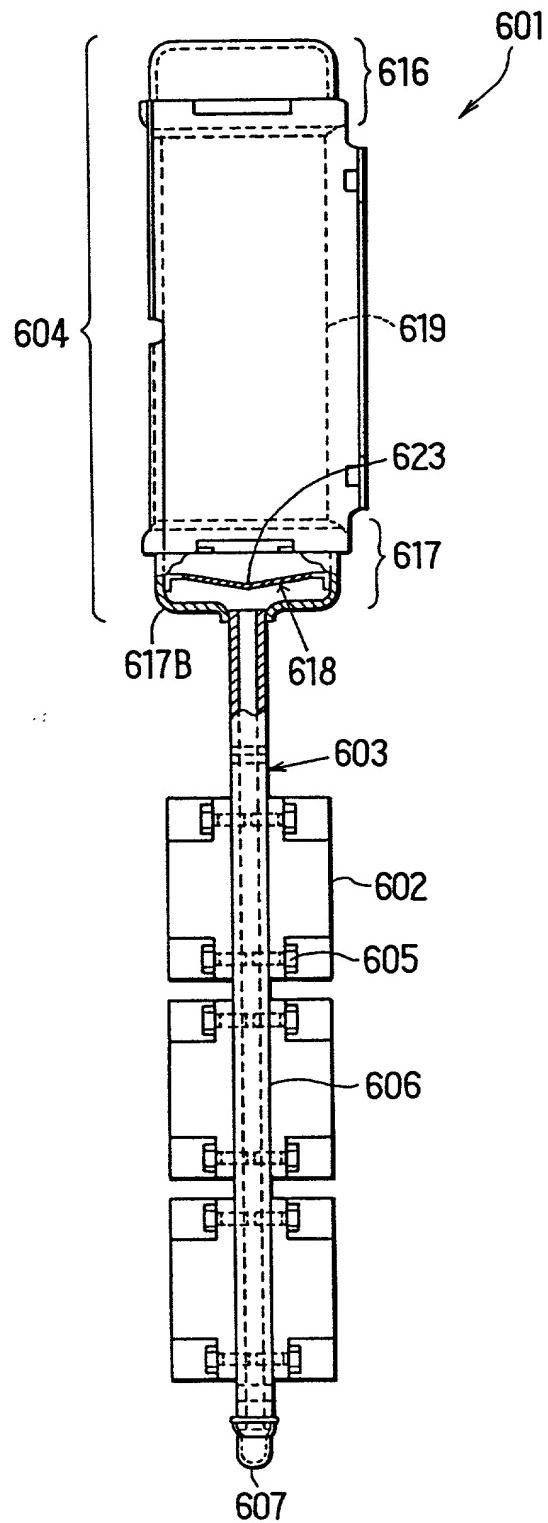
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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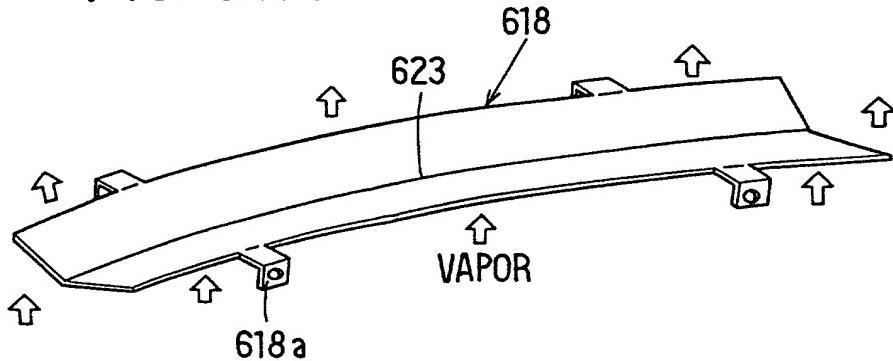
## FIG. 58



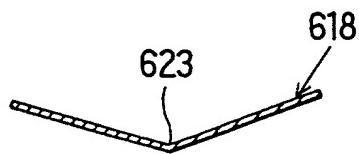
Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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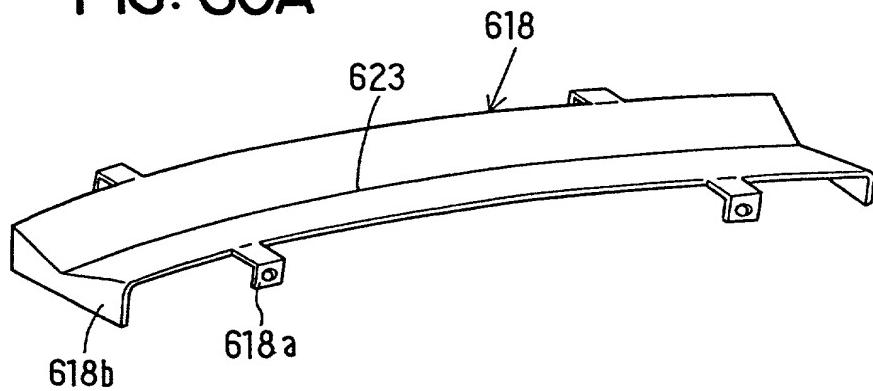
**FIG. 59A**



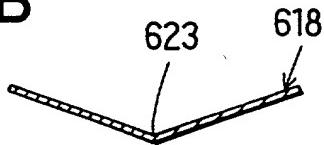
**FIG. 59B**



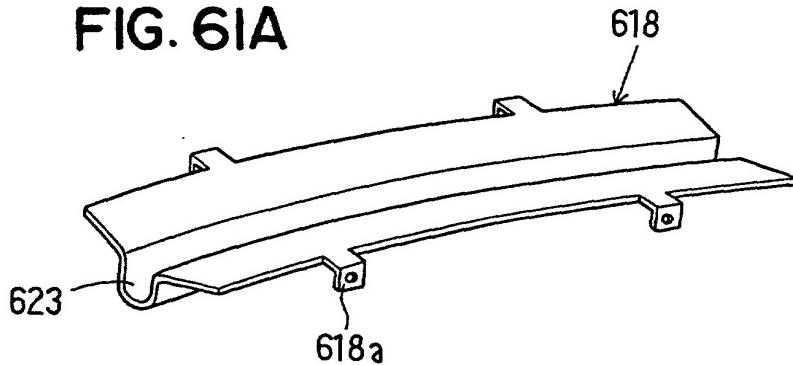
**FIG. 60A**



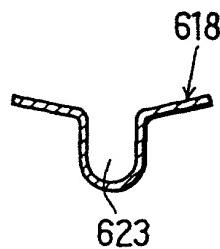
**FIG. 60B**



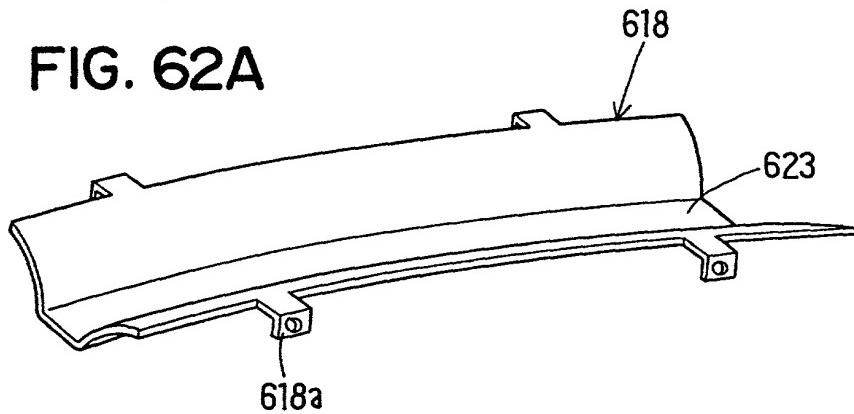
**FIG. 6IA**



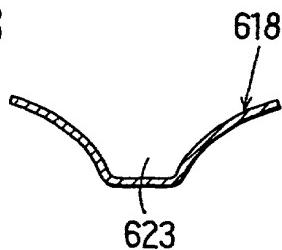
**FIG. 6IB**



**FIG. 62A**



**FIG. 62B**



Title: Cooling Apparatus Boiling and Condensing Refrigerant

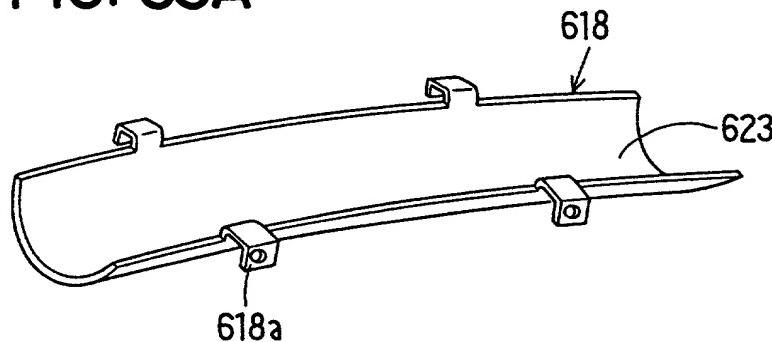
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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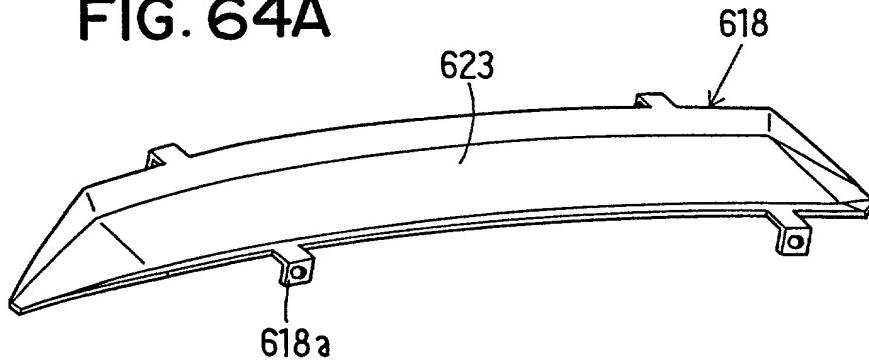
**FIG. 63A**



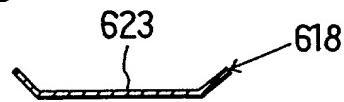
**FIG. 63B**



**FIG. 64A**



**FIG. 64B**



Title: Cooling Apparatus Boiling and Condensing Refrigerant

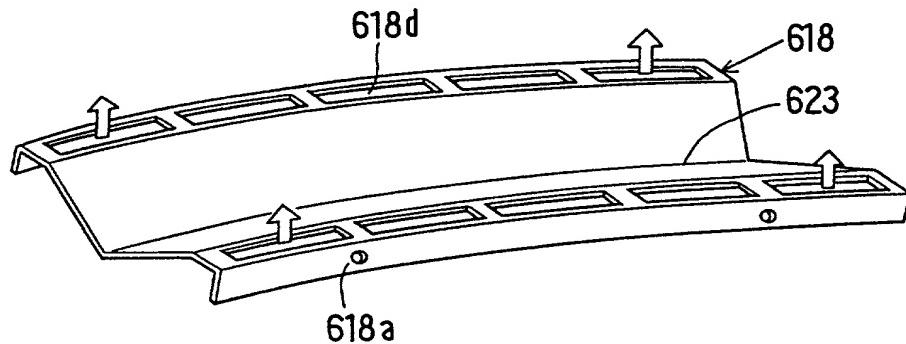
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

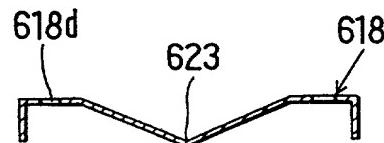
Atty. Ref. No.: 4041J0229DVA

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**FIG. 65A**



**FIG. 65B**



**FIG. 66**

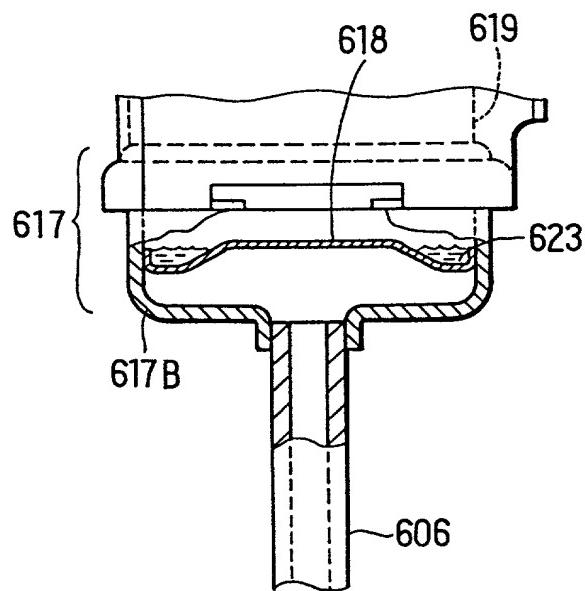


FIG. 67A

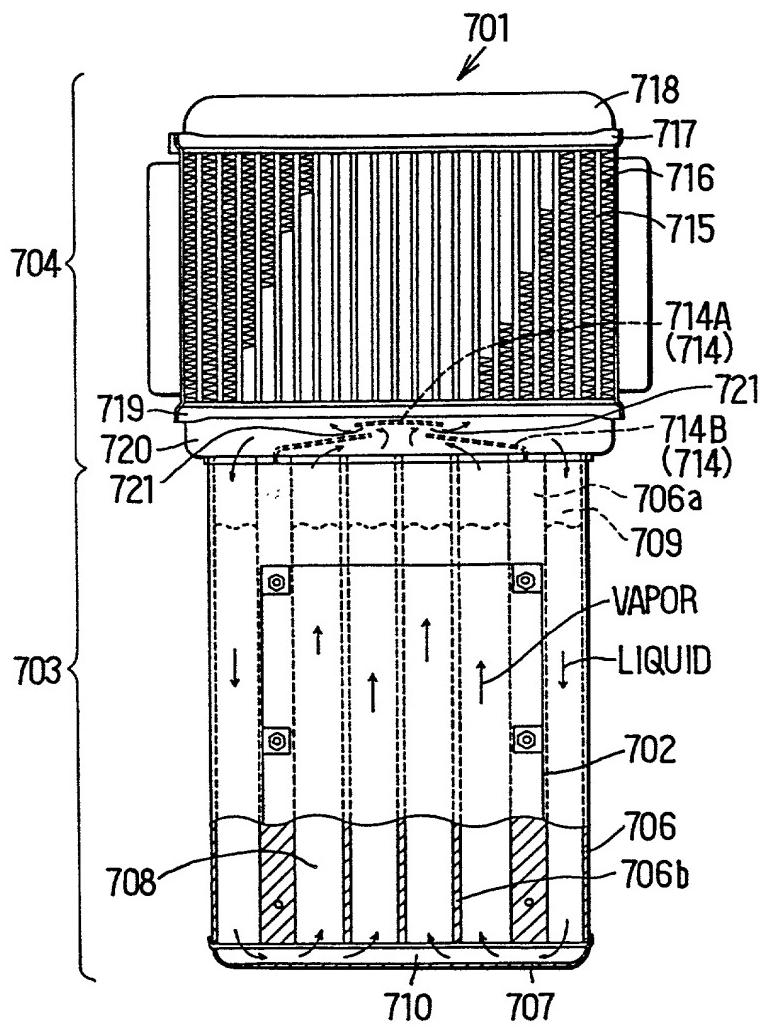
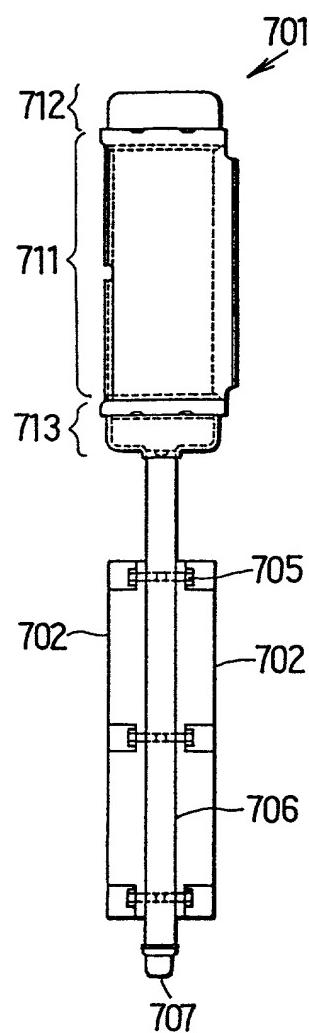


FIG. 67B



Title: Cooling Apparatus Boiling and Condensing Refrigerant

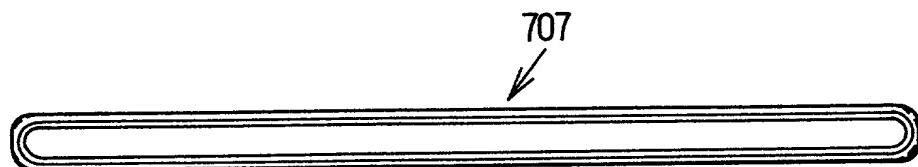
Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

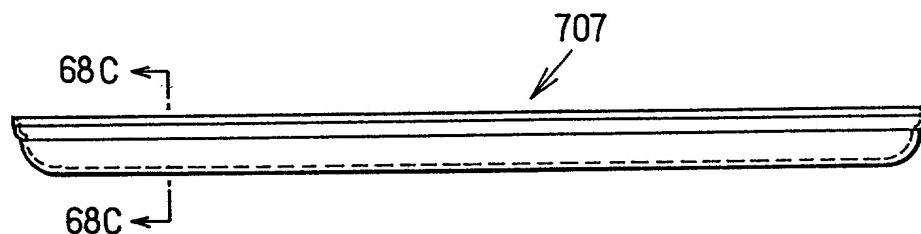
Atty. Ref. No.: 4041J0229DVA

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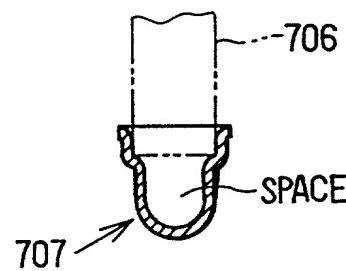
**FIG. 68A**



**FIG. 68B**



**FIG. 68C**



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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FIG. 69A

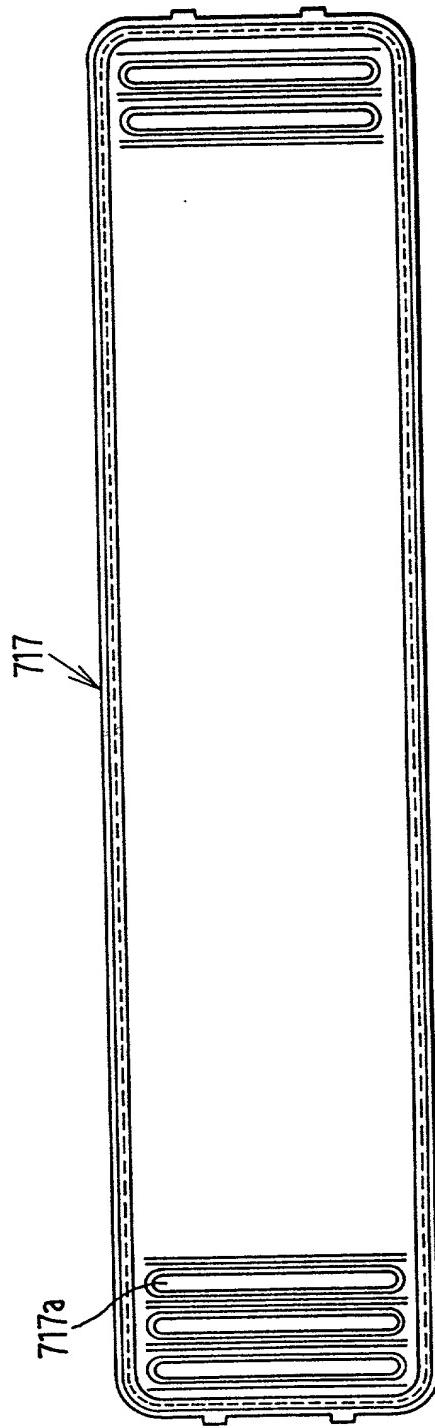
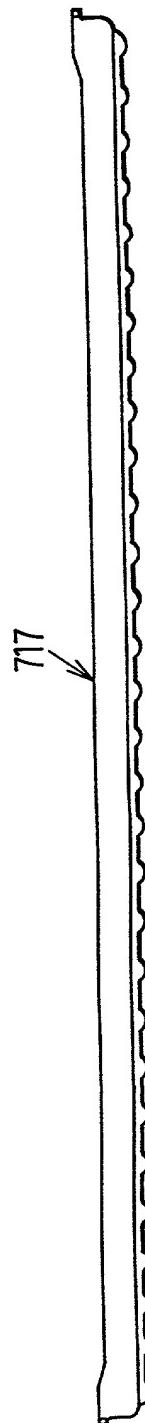


FIG. 69B



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 70A

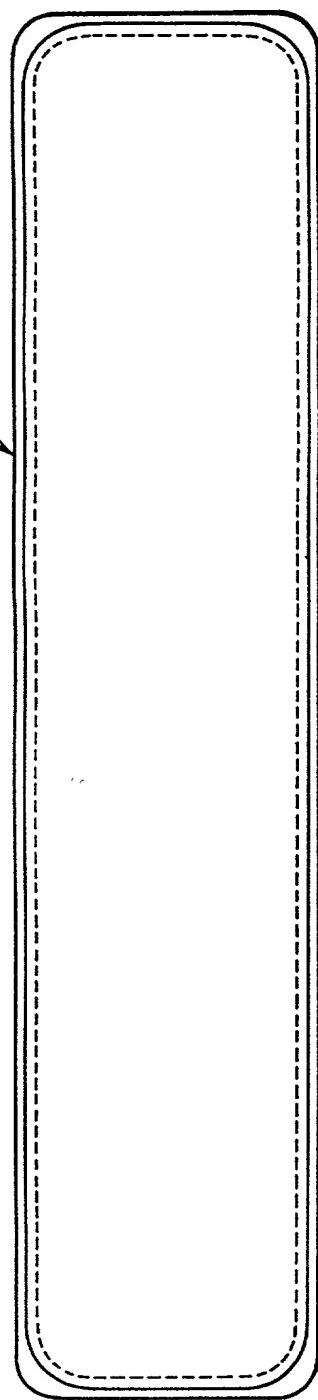


FIG. 70B

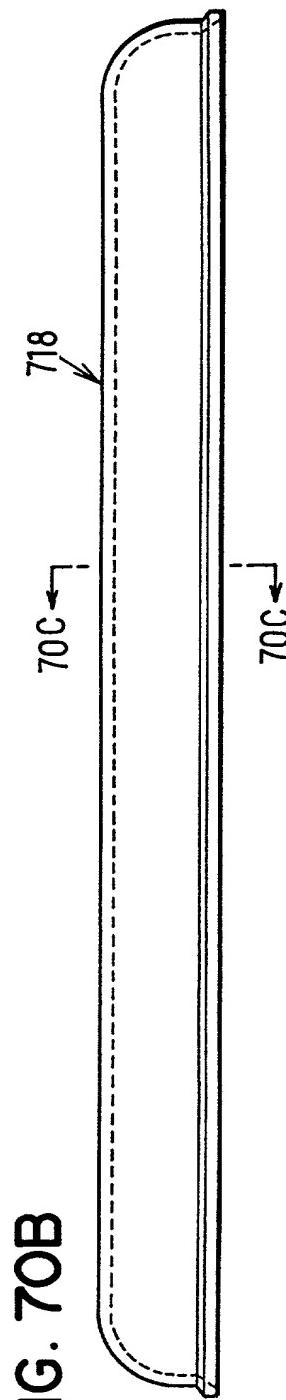
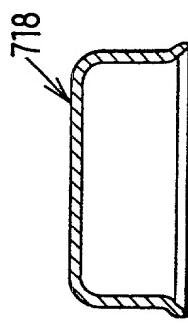


FIG. 70C



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 7IA

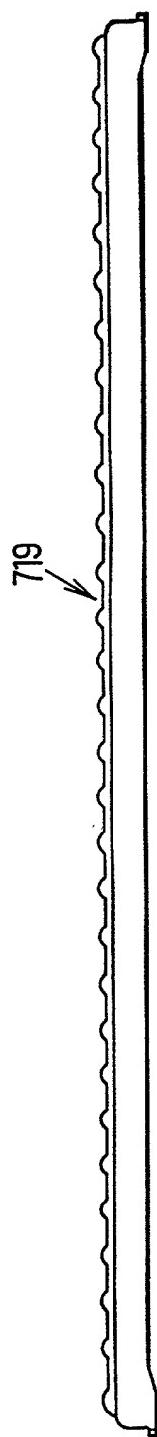
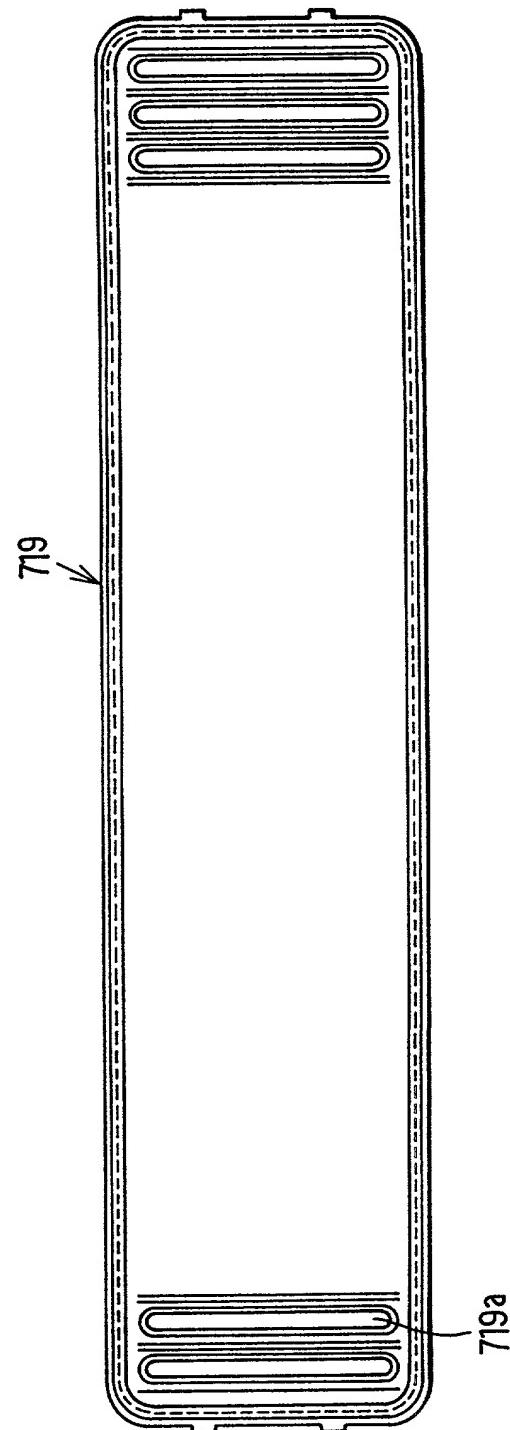


FIG. 7IB



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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FIG. 72A

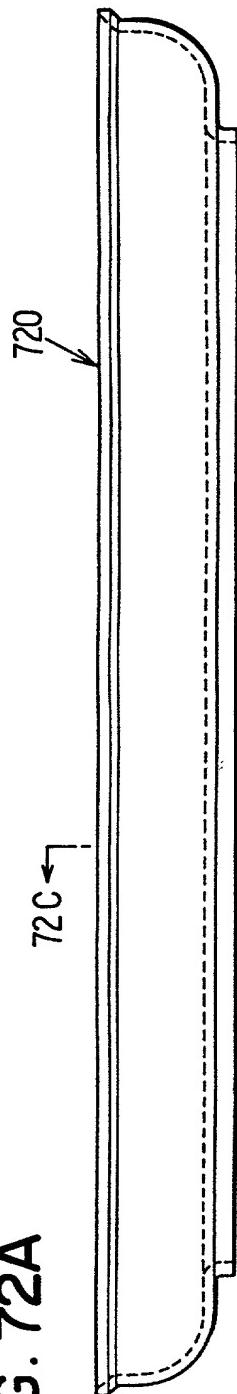


FIG. 72B

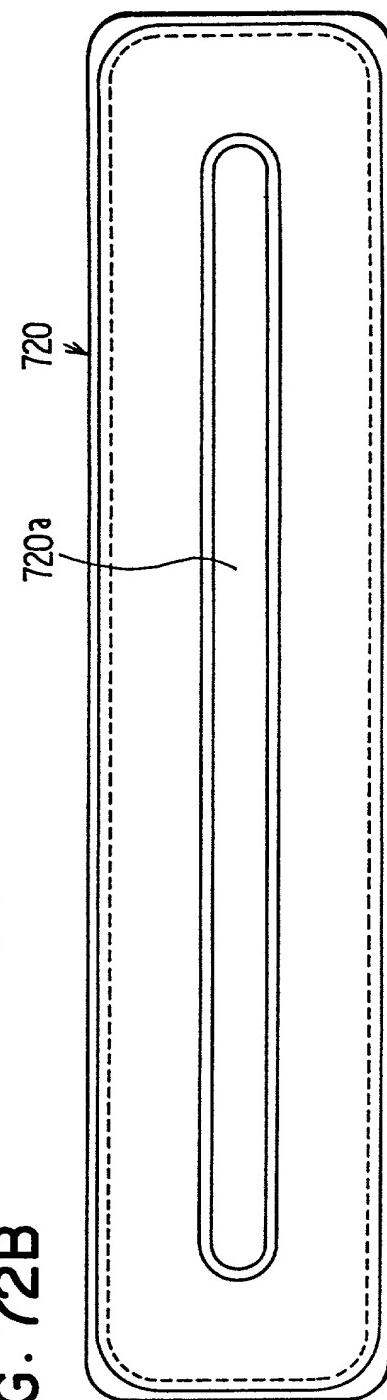
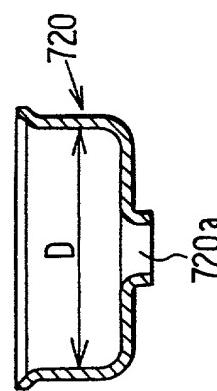
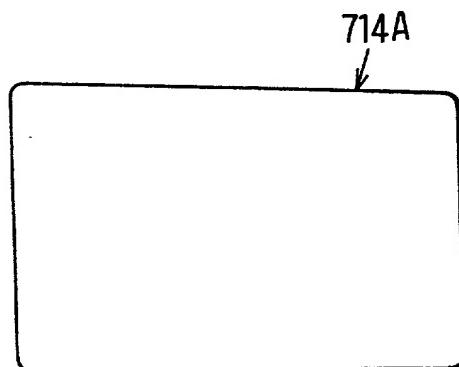


FIG. 72C



**FIG. 73A**



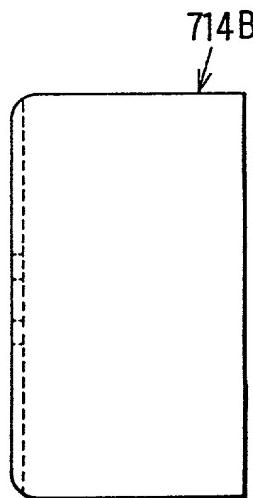
**FIG. 73C**



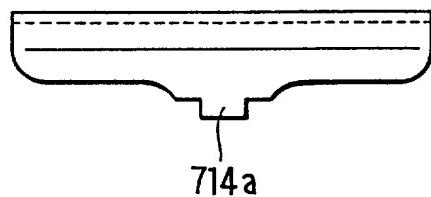
**FIG. 73B**



**FIG. 74A**



**FIG. 74C**



**FIG. 74B**

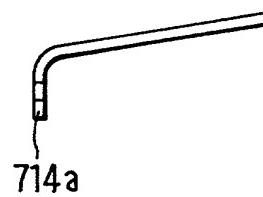
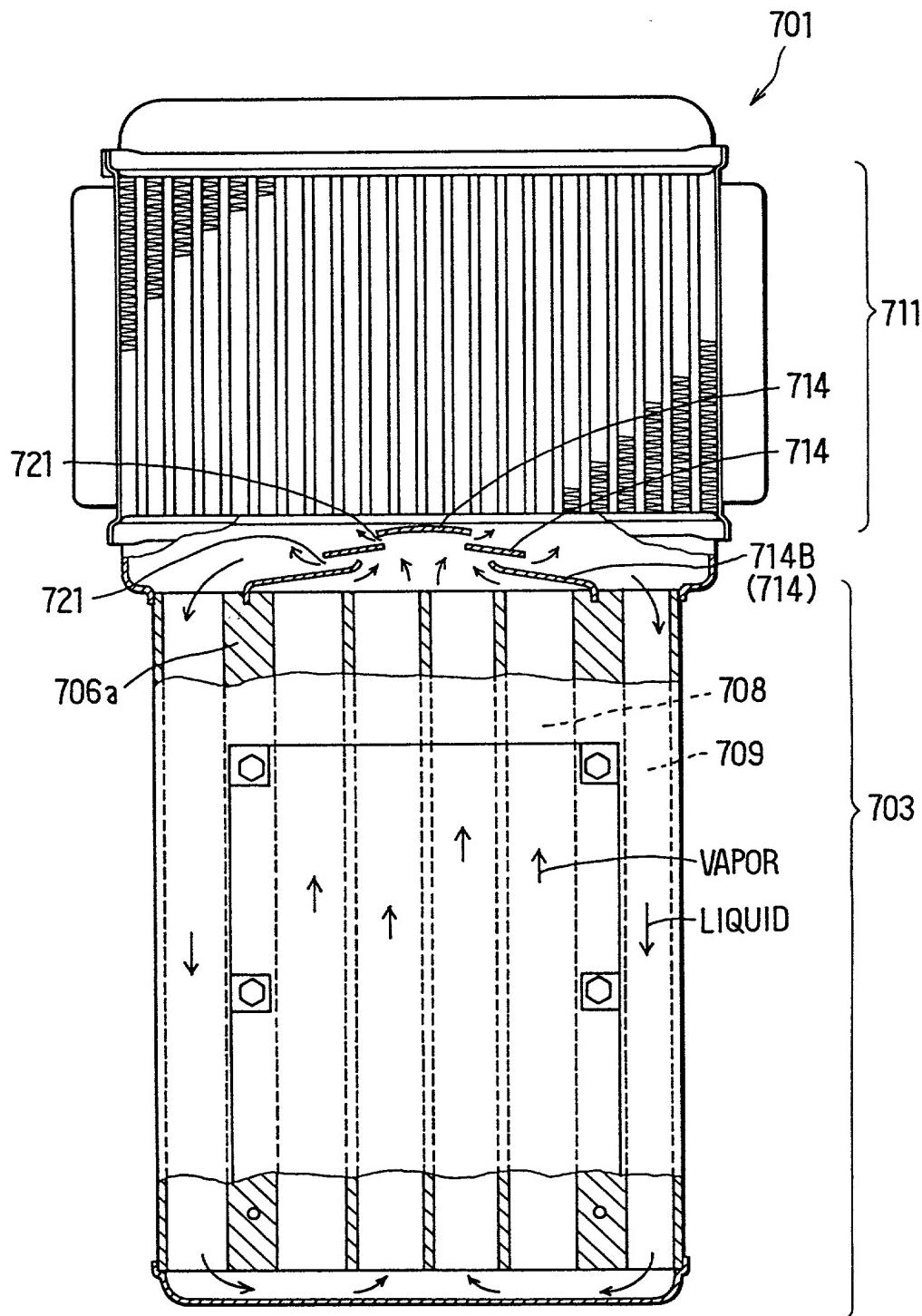


FIG. 75



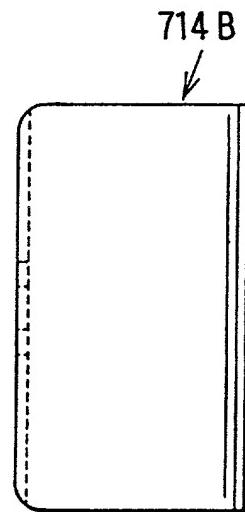


FIG. 76A

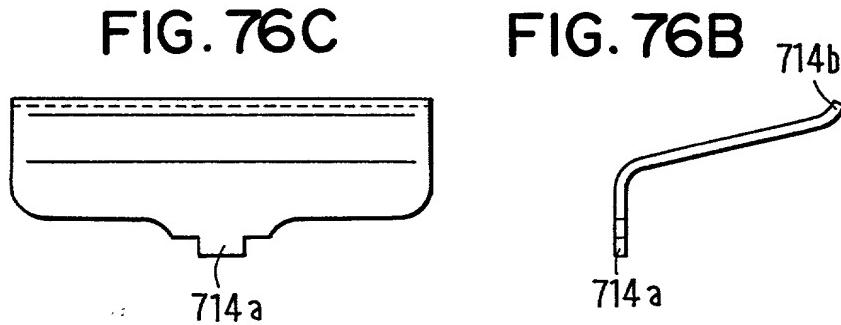


FIG. 76C

FIG. 76B

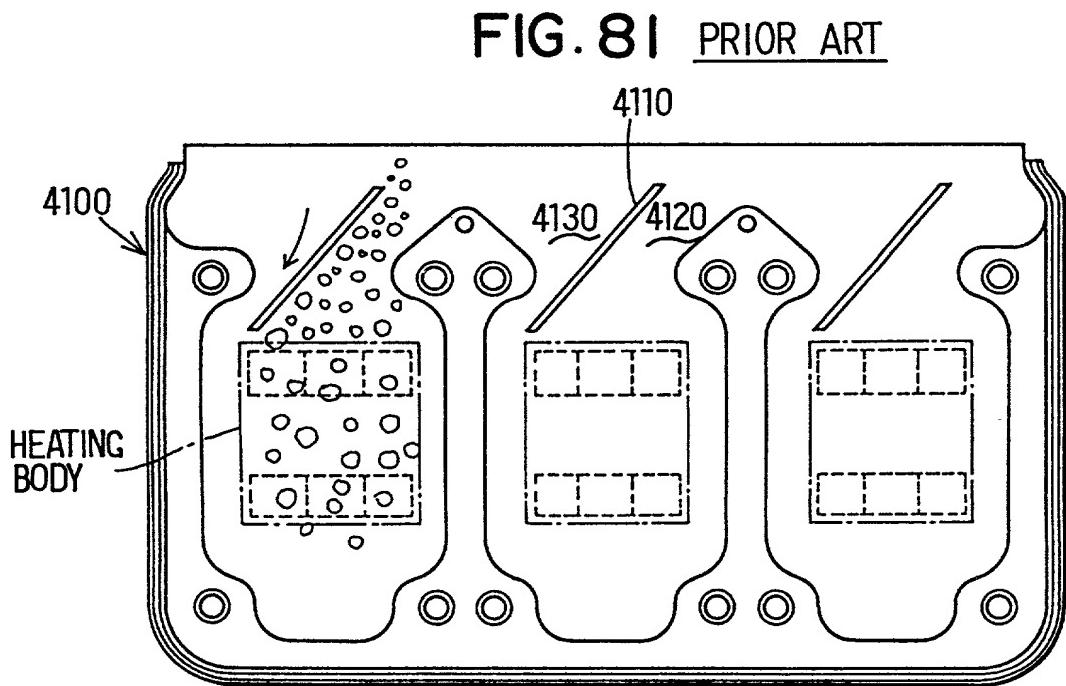


FIG. 77A

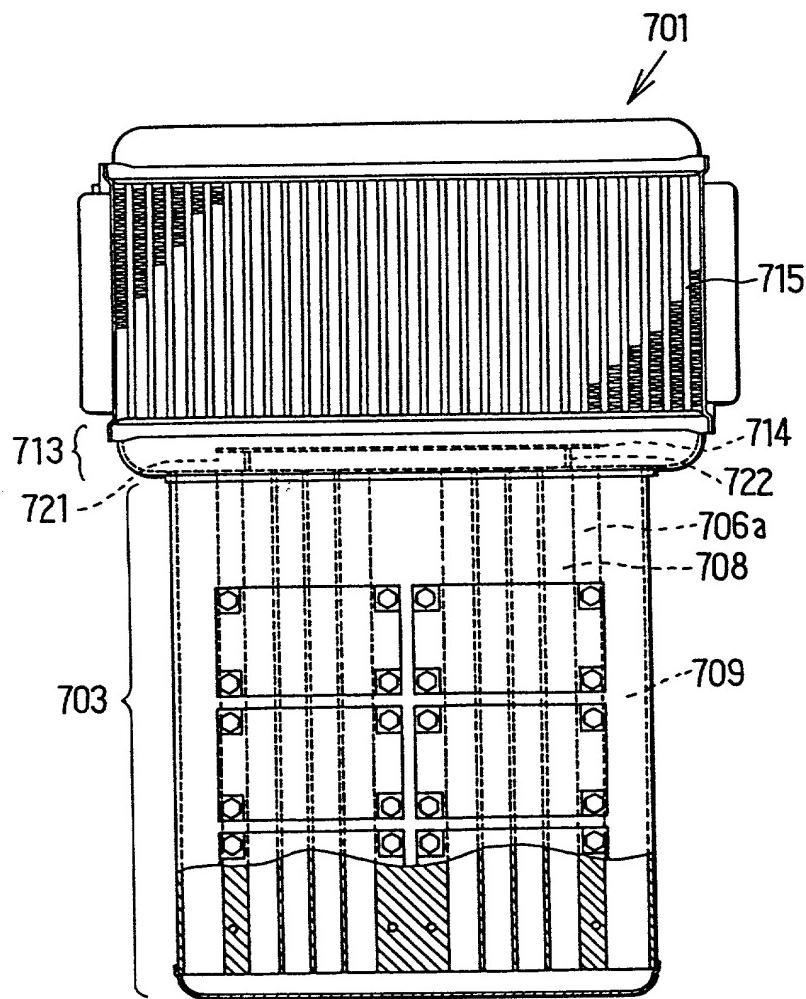
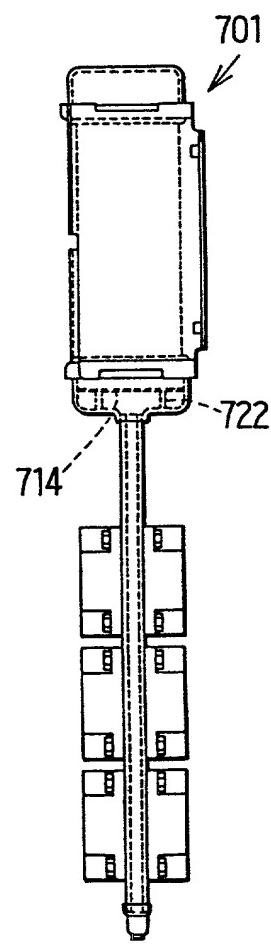


FIG. 77B



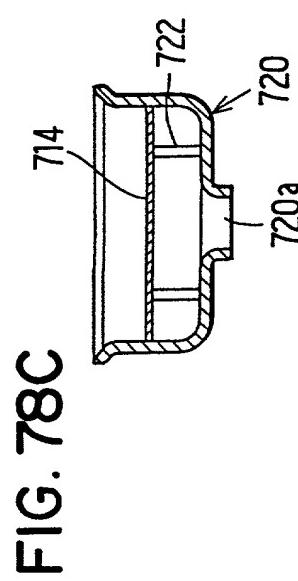
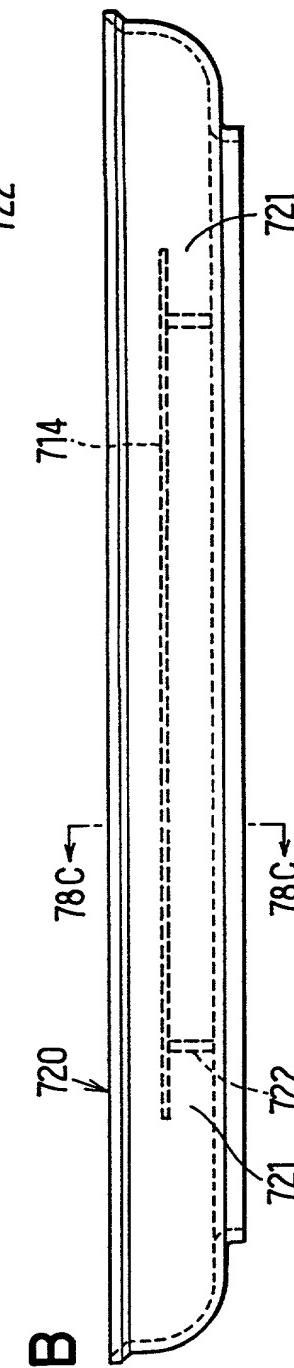
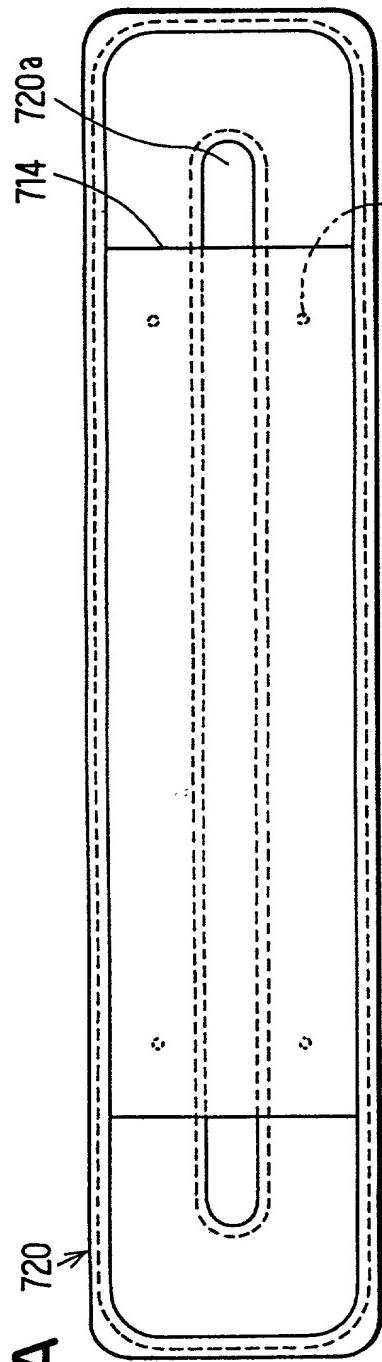
Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 79A

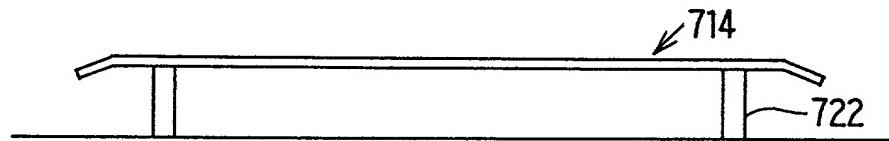


FIG. 79B

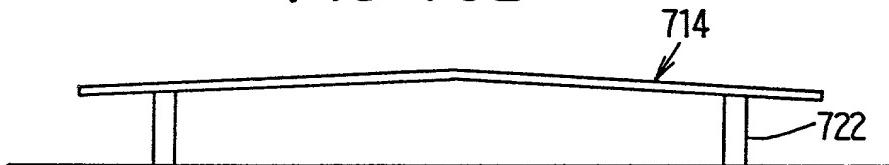


FIG. 79C

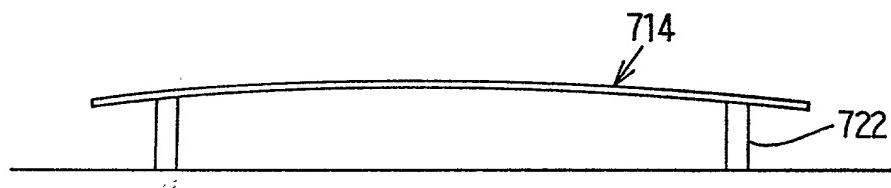
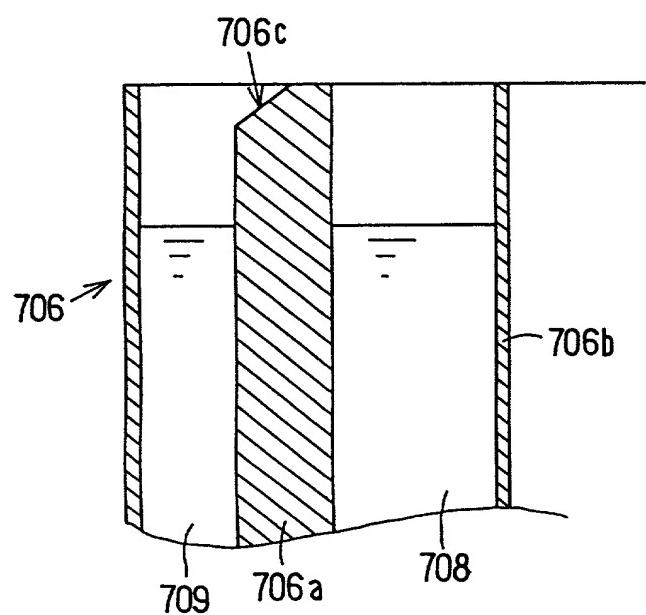
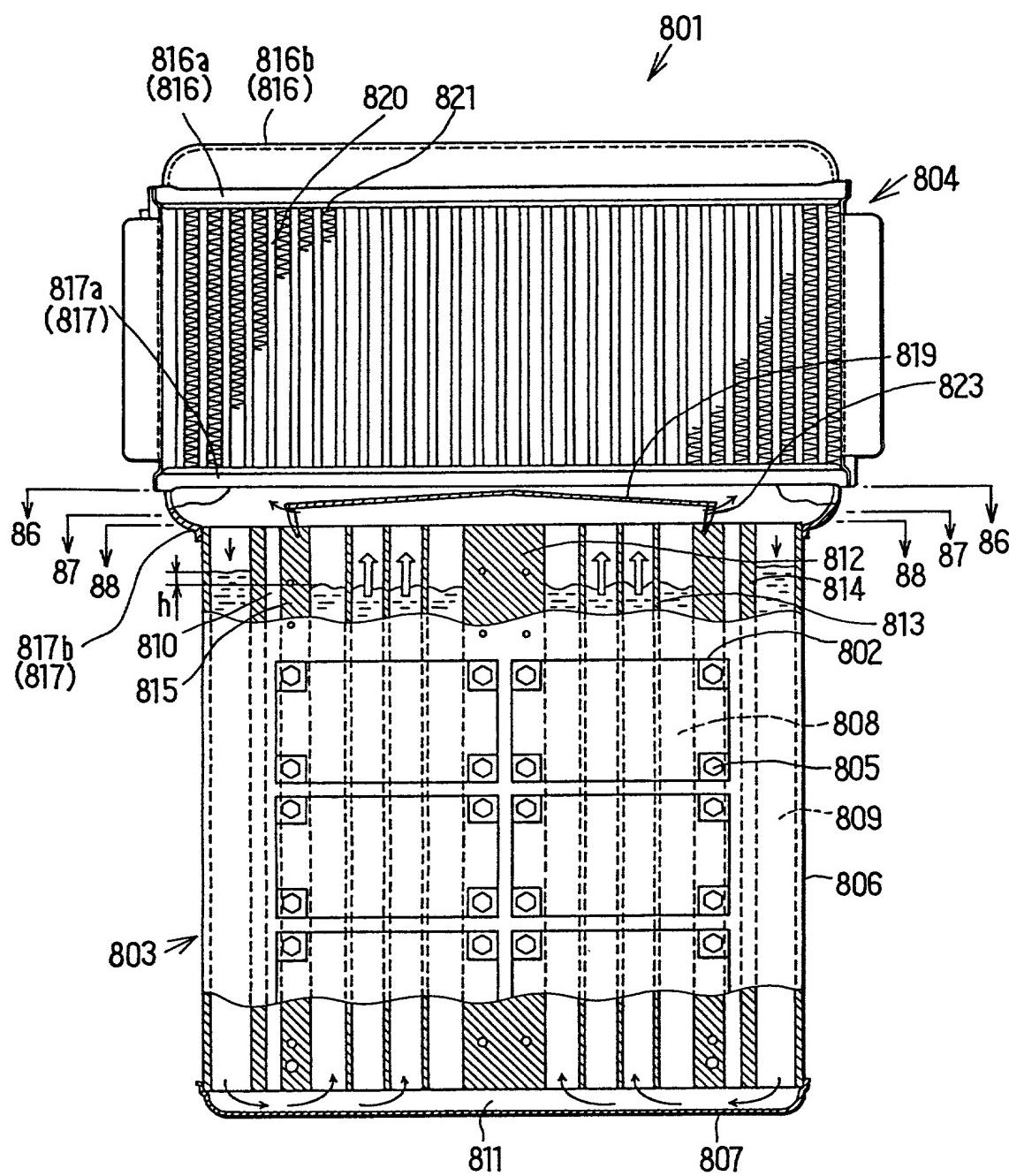


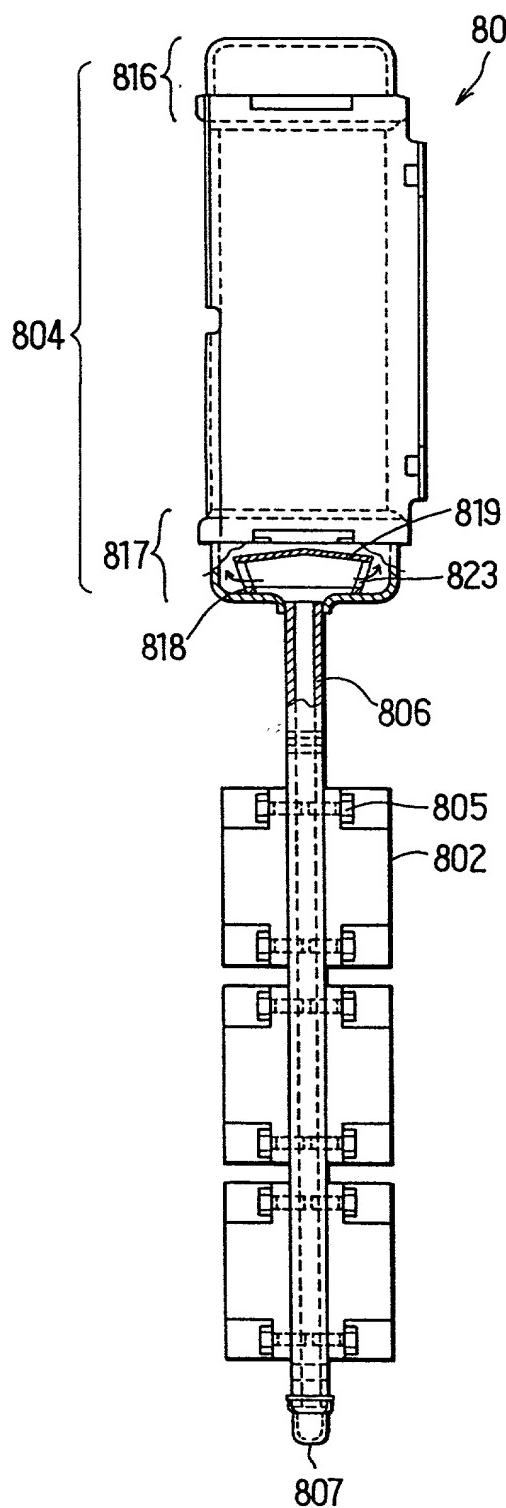
FIG. 80



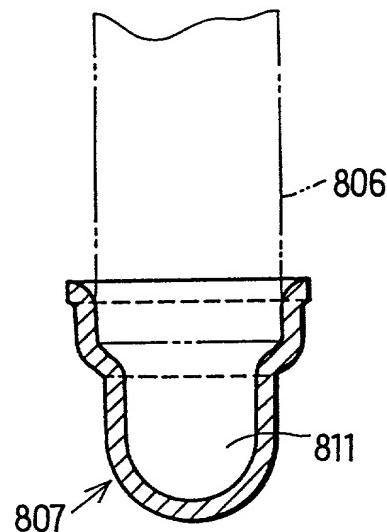
**FIG. 82**



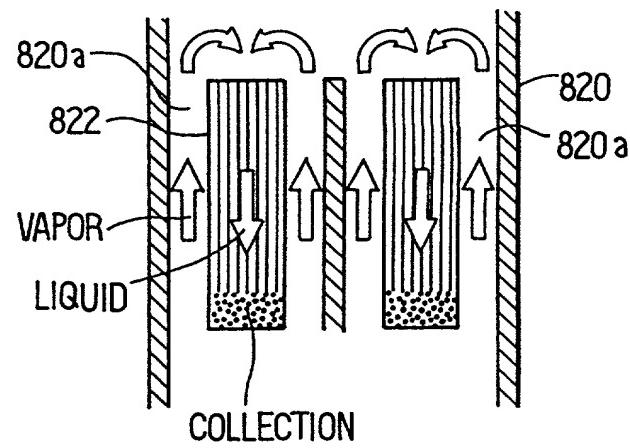
**FIG. 83**



**FIG. 84**



**FIG. 85**



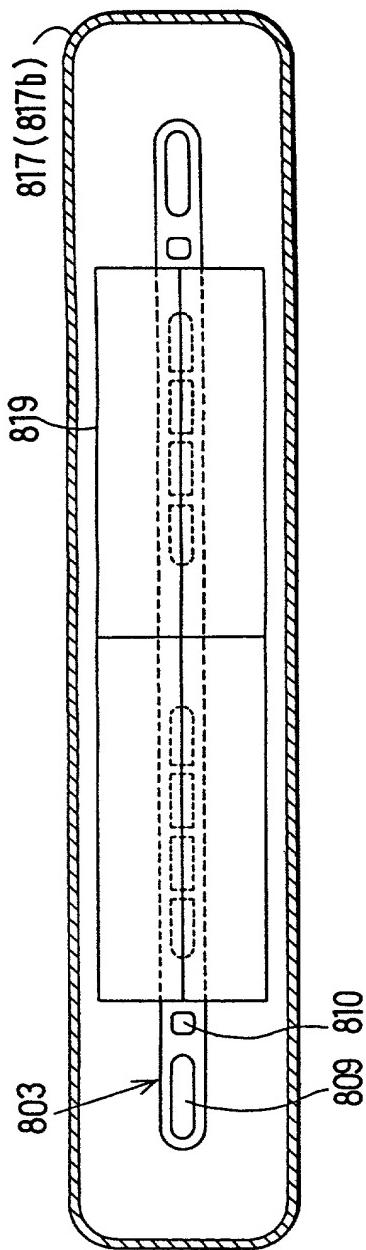


FIG. 86

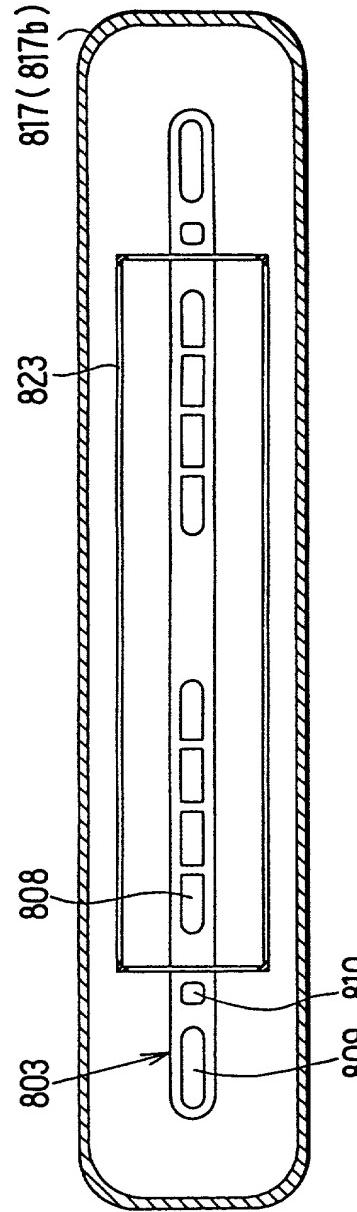


FIG. 87

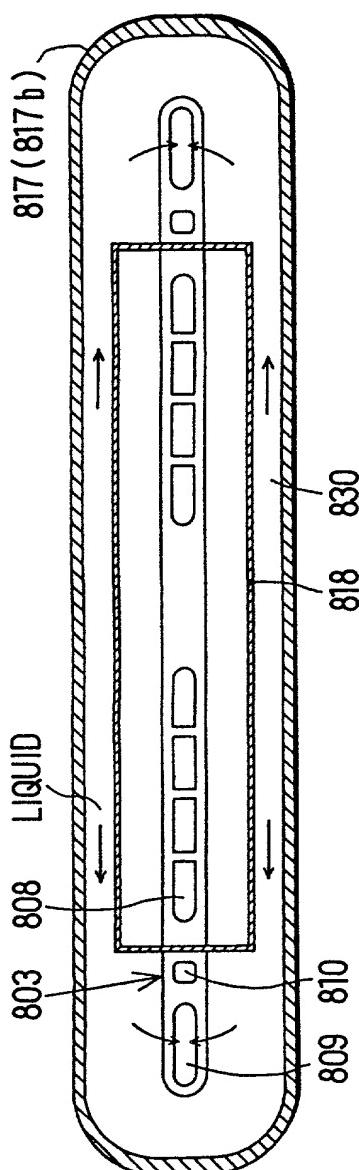
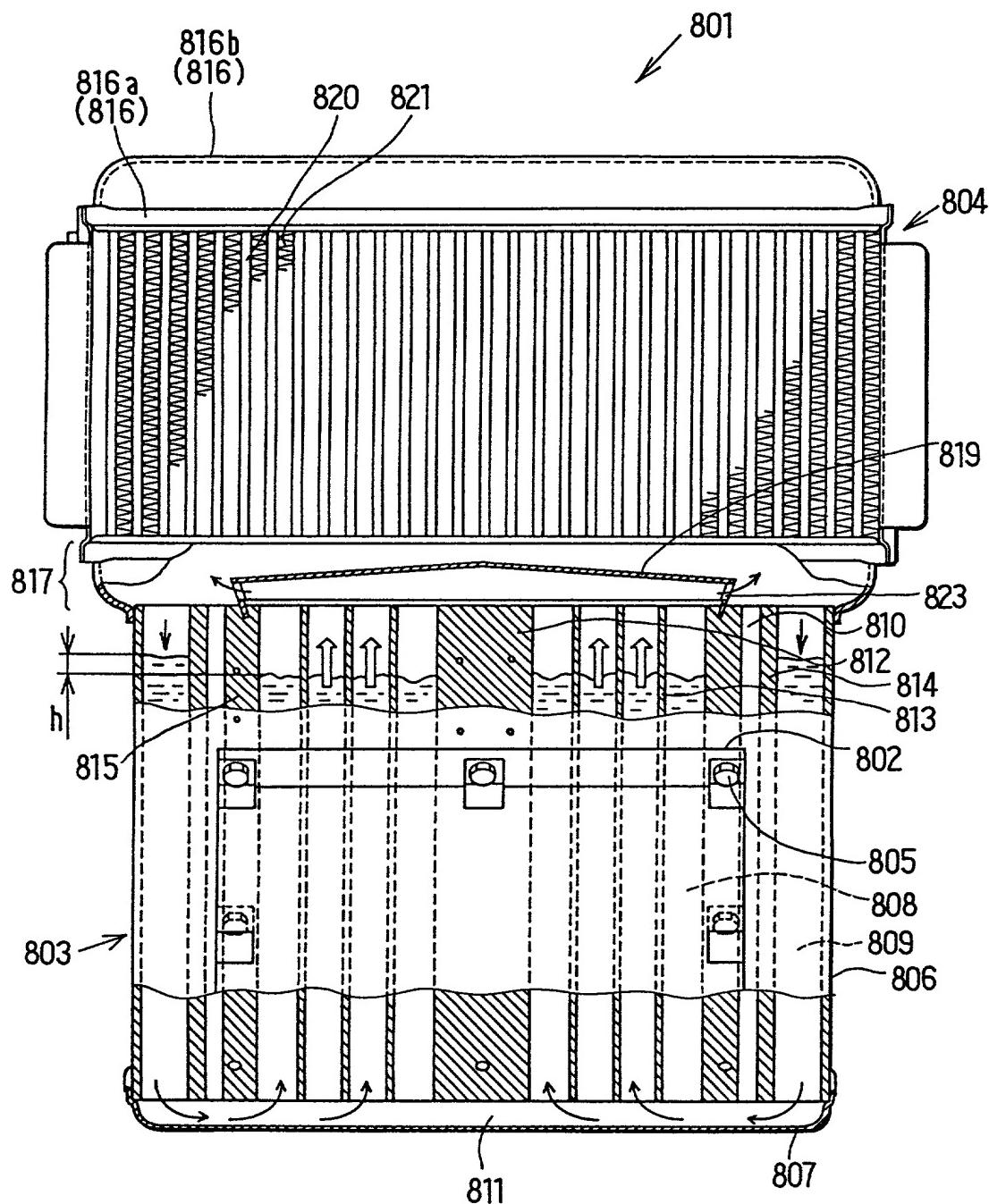


FIG. 88

FIG. 89



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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FIG. 90

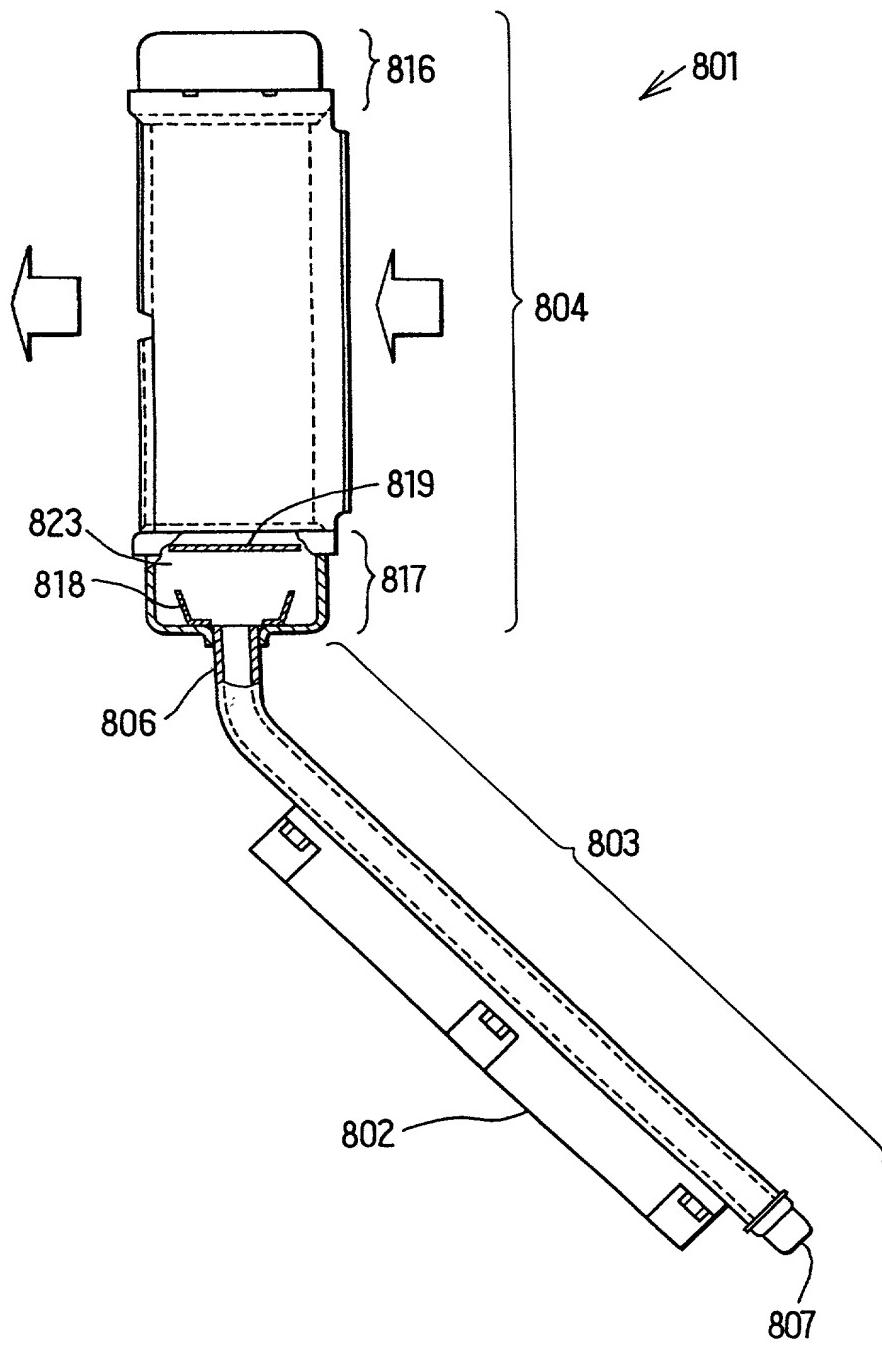
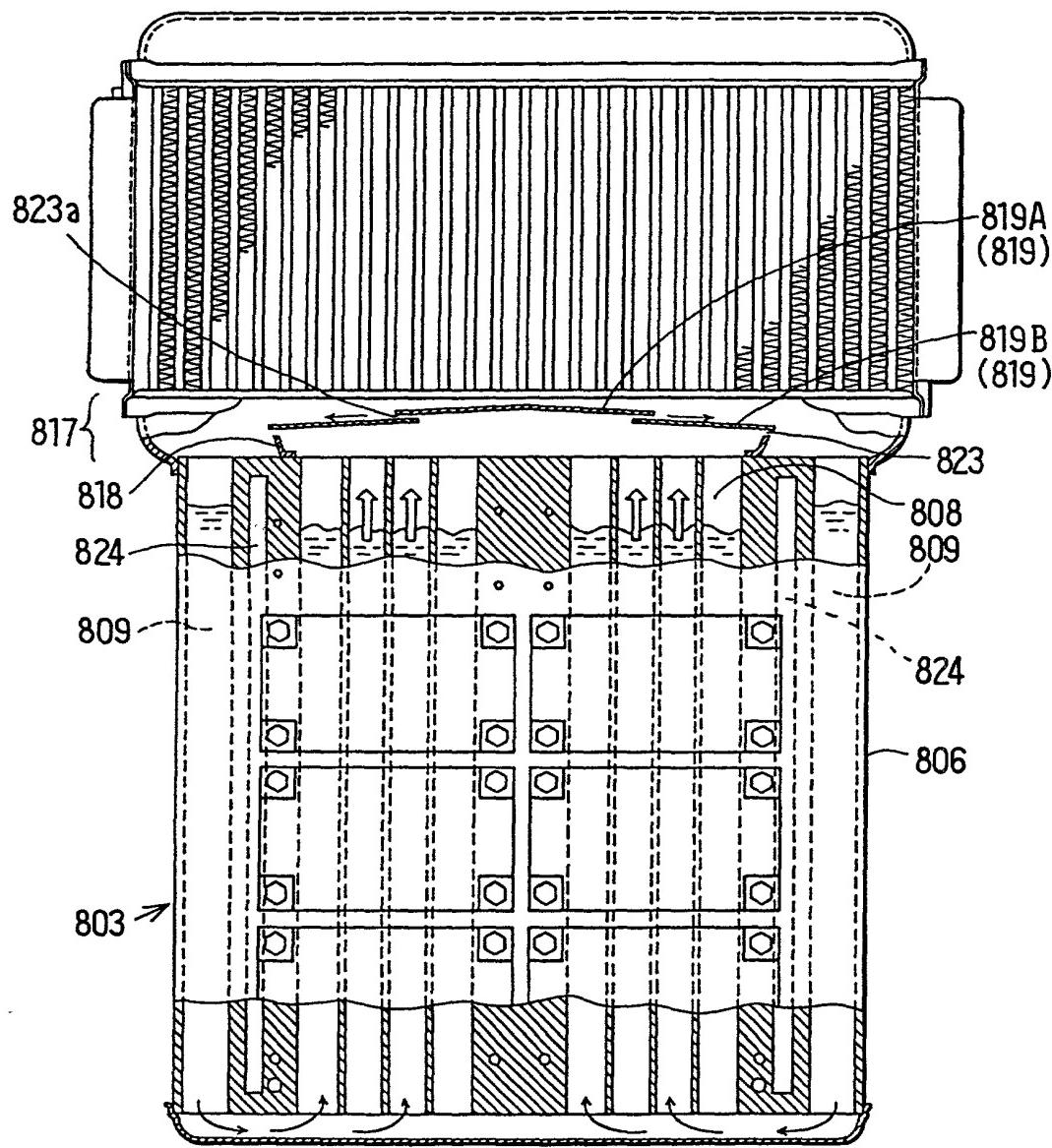


FIG. 91



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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## FIG. 92

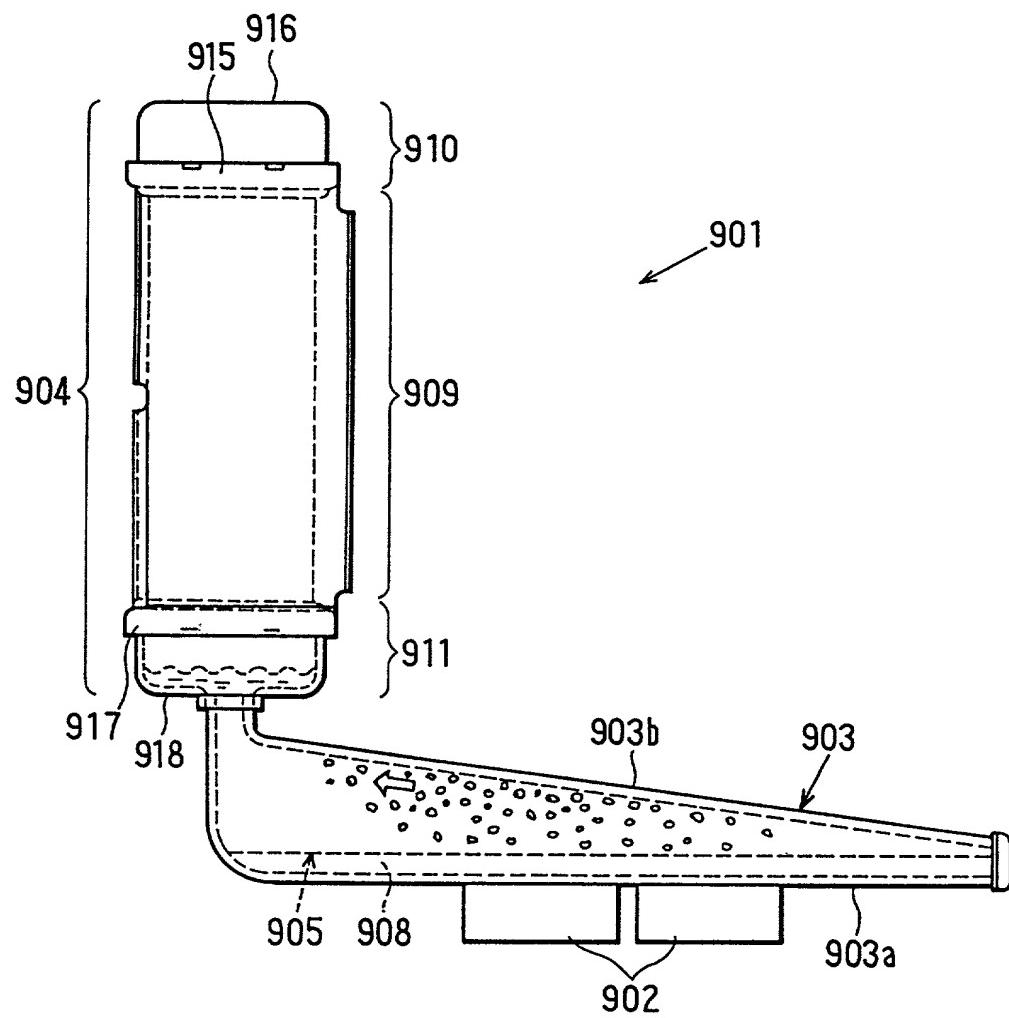
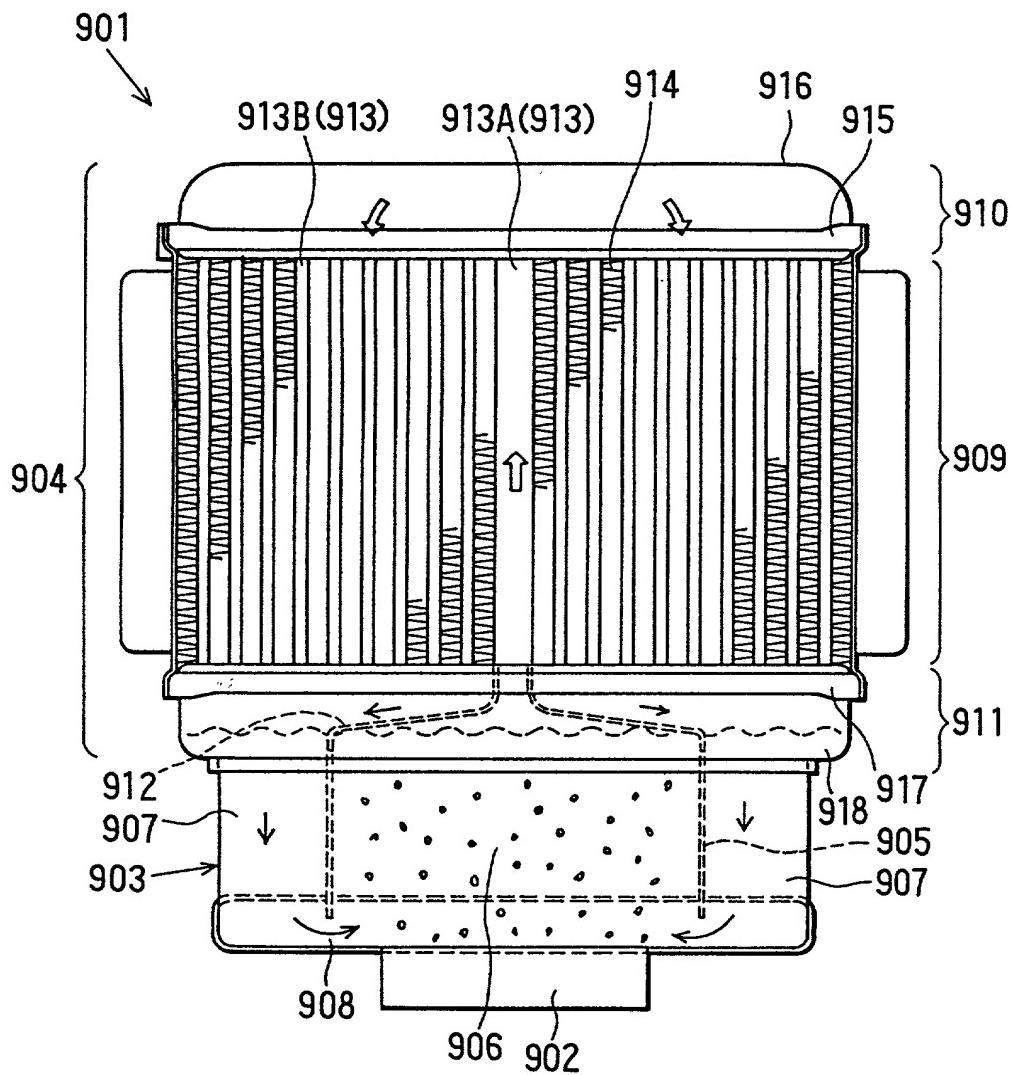


FIG. 93



Title: Cooling Apparatus Boiling and Condensing Refrigerant

Inventor: Hiroyuki Osakabe

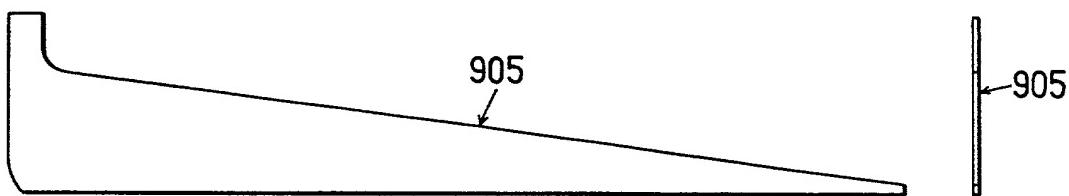
Michael J. Schmidt, Harness, Dickey & Pierce, PLC

Atty. Ref. No.: 4041J0229DVA

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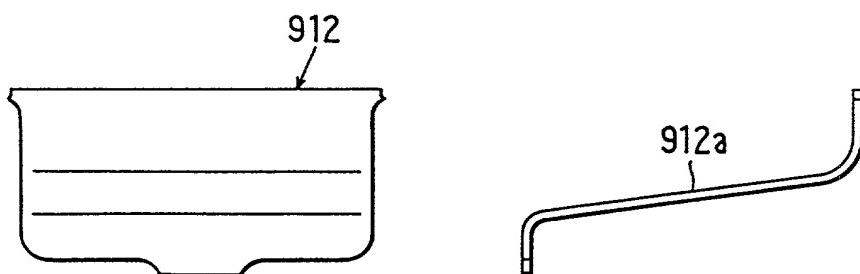
**FIG. 94A**

**FIG. 94B**



**FIG. 95A**

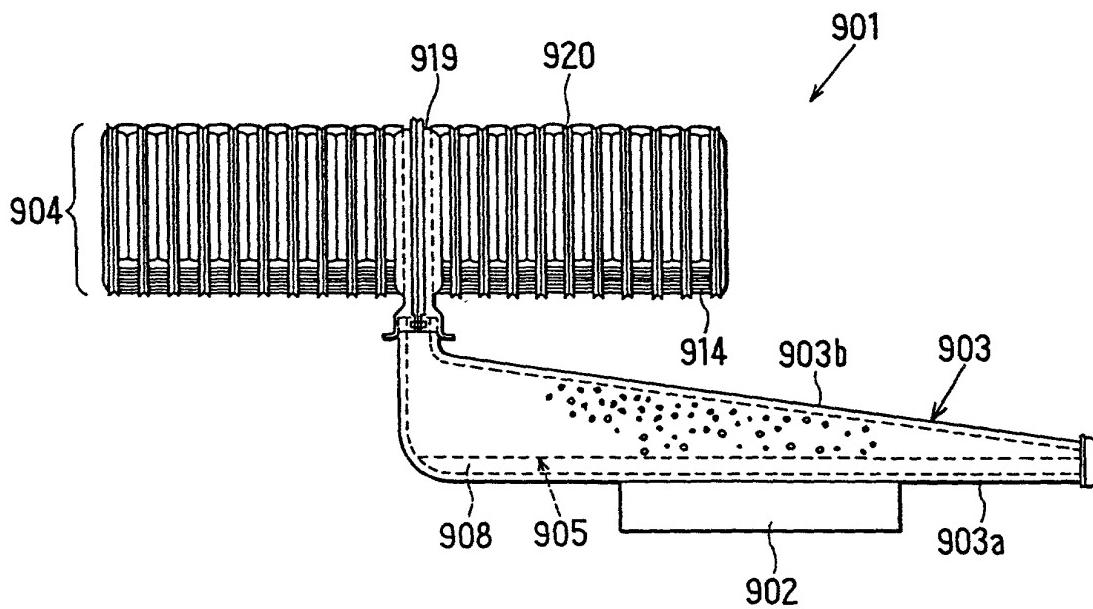
**FIG. 95B**



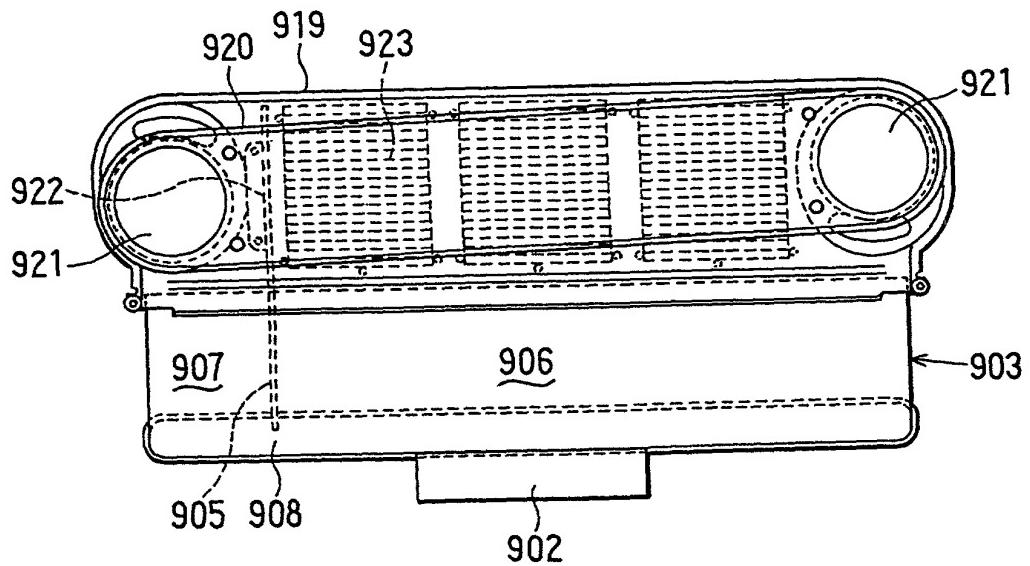
Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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**FIG. 96**



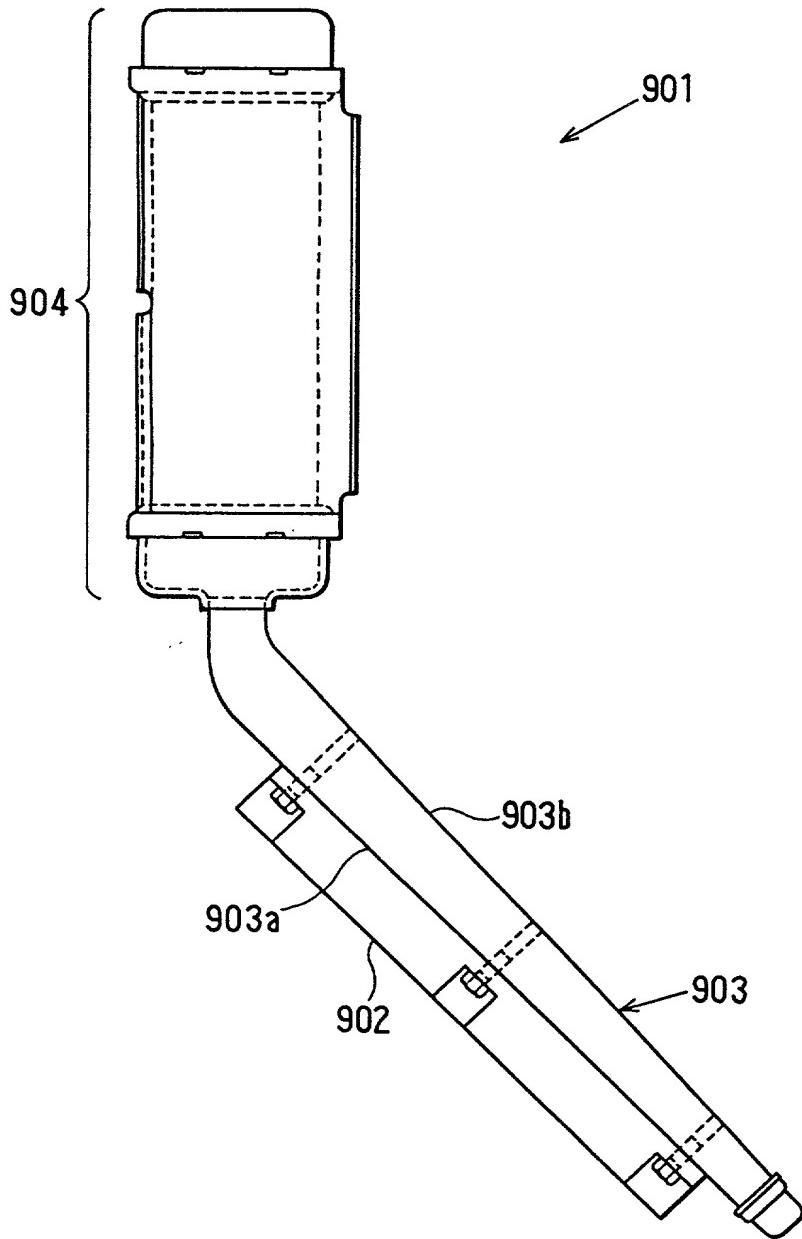
**FIG. 97**



Title: Cooling Apparatus Boiling and Condensing Refrigerant  
Inventor: Hiroyuki Osakabe  
Michael J. Schmidt, Harness, Dickey & Pierce, PLC  
Atty. Ref. No.: 4041J0229DVA

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## FIG. 98



## FIG. 99

